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**Trees, Forests and Farmers:  
For-Profit Conservation and Voluntary  
Carbon Markets in Peru**

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**Submitted for the degree of Doctor of Philosophy in  
Development Studies**

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I hereby declare that this thesis has not been and will not be, submitted in whole or in part to another University for the award of any other degree.

Signature:

## Abstract

This thesis examines a suite of for-profit conservation projects producing carbon credits for the voluntary carbon markets, analysing how forests – and trees – are being framed and produced as a solution to climate change. Based on ethnographic fieldwork in the San Martín region of Peru between 2017-19, it builds on an emerging literature on the production of carbon to show that schemes geared towards producing carbon credits for sale on the voluntary markets carry with them significant risks which could undermine their stated goals of local development, emissions reductions and biodiversity conservation.

The research offers an original political ecological theorisation of the complex and evolving relationship between capital, carbon and forests by examining the interplay between conservation, reforestation and agricultural production in these projects. Firstly, it highlights how for-profit conservation schemes are driving a privatisation of land and carbon, tending towards a centralisation of surplus value capture. Secondly, it shows how selling credits on the voluntary markets relies on a framing of the natural world as a simplified and stable ‘green infrastructure’, to produce a specific ‘Nature’ for human development. And, thirdly, it shows how projects internalise critiques of capitalism to, counter-intuitively, allow for continued growth and consumption.

By analysing the value chains that have sprung up to meet the demand of those looking to offset carbon, this research thus questions the growing focus on carbon offsetting and ‘net zero emissions’ pledges to highlight the risks of the growing role of forest conservation and reforestation in delivering ‘nature-based solutions’ to climate change. In detailing the changing landscapes of trees, forests and labour under for-profit conservation in Peru, it provides a novel view of how privatisation and offsetting are impacting the production of socionatures in the name of greening the global economy.



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## Abbreviations

<b>ACOPAGRO</b>	The Agrarian Cocoa Cooperative
<b>APAHUI</b>	The Association of Agricultural Producers of Huicungo
<b>APROBOC</b>	The Association for the Protection of the Communal Forests of Dos de Mayo, Alto Huayabamba
<b>ARA</b>	Regional Environment Authority
<b>CCBA</b>	Climate Community and Biodiversity Alliance
<b>CDM</b>	Clean Development Mechanism
<b>CER</b>	Certified Emission Reduction
<b>CO<sub>2</sub></b>	Carbon Dioxide
<b>FUNDAVI</b>	Fundación Amazonia Viva
<b>GIS</b>	Geographic Information System
<b>IUCN</b>	International Union for Conservation of Nature
<b>NGO</b>	Non-governmental organisation
<b>OSINFOR</b>	The Agency for the Supervision of Forest Resources
<b>PES</b>	Payments for Ecosystem Services
<b>PDD</b>	Project Design Document
<b>PPA</b>	Privately Protected Area
<b>REDD+</b>	Reducing Emissions from Deforestation and Forest Degradation
<b>SERFOR</b>	The National Forest and Wildlife Service
<b>tCO<sub>2</sub>e</b>	Tonne of Carbon Dioxide Equivalent
<b>TNC</b>	The Nature Conservancy
<b>UN</b>	United Nations
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>USAID</b>	United States Agency for International Development
<b>VCS</b>	Verified Carbon Standard

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## Chapter One: For-Profit Conservation and Trees as a Climate Solution

“So let's stop fussing about what is the best solution for climate and our ecosystems: it's trees.” (Lecomte 2019)

Recent years have seen a proliferation of increasingly bold targets linking the preservation and restoration of forests to broader climate change goals. Campaigns are underway to follow up the Aichi targets with new goals for protected areas covering at least 30% of land and 30% of sea in Europe, or even half the Earth (Kopnina 2016). The Bonn Challenge has targeted the restoration of 150 million hectares of land by 2020 and 350 million by 2030 and the UN has declared 2021 to 2030 the ‘Decade on Ecosystem Restoration’, while the Trillion Tree Campaign launched at the World Economic Forum in Davos aims for planting a trillion trees across the globe. These targets and goals have secured the backing and endorsement of a diverse range of actors, from nation states to supranational groups and, in the case of tree planting, from climate activist Greta Thunberg<sup>1</sup> to Donald Trump<sup>2</sup>.

To deliver on these goals – and the multitude of smaller targets to reduce carbon impacts through offsetting – conservation has increasingly turned to private actors to make up funding shortfalls and has, in turn, focused on ways to make conservation a profitable activity. Multiple companies have emerged to aid in this process of **for-profit conservation**, in particular by working to deliver carbon offsets through REDD+ schemes, which quantify carbon sequestered or emissions avoided via forestry projects<sup>3</sup>.

While a great deal of research has been conducted into REDD+ and the changing relationship between carbon markets and forests, much of this has focused on pilot projects for the stalling official compliance markets (see Asiyambi and Lund 2020 for a summary), rather than the many projects and companies which are already established and generating, marketing and selling credits through the voluntary markets. The market for voluntary carbon offsets is growing rapidly and for some actors has created a profitable business model

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<sup>1</sup> <https://www.naturalclimate.solutions> [Accessed 21 January 2021]

<sup>2</sup> <https://www.whitehouse.gov/articles/president-trump-signs-one-trillion-trees-executive-order-promoting-conservation-regeneration-nations-forests/> [Accessed 21 January 2021]

<sup>3</sup> REDD+ stands for: reducing emissions from deforestation and forest degradation in developing countries, and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries.



through the creation of conservation and reforestation projects. This research focuses on a suite of projects which fall within this boom of the voluntary market and for-profit conservation, analysing the value chains that have sprung up to meet the demand of corporations, charities and individuals looking to offset carbon. In doing so, it looks at how trees, forests and farmers are being framed and produced as a solution to climate change. This adds to an emerging literature on **‘nature-based solutions’** – “a concept introduced specifically to promote nature as a means for providing solutions to climate mitigation and adaptation challenges” (Nesshöver et al. 2017: 1216) – to show the potential effects of conservation initiatives which increasingly link the carbon sequestering potential of trees with global climate targets (Griscom et al. 2017).

The research is based on ethnographic fieldwork conducted over three periods between 2017 and 2019, working and living amongst a for-profit conservation project in the Peruvian Amazon. The Biocorredor Martín Sagrado REDD+ Project in the Huayabamba Valley of San Martín, Peru, officially covers over 300,000 hectares of protected forest, with a wider area of influence in the project’s buffer zone and with numerous associated reforestation projects targeting the planting of 40 million trees in the San Martín region (FUNDAVI 2018). The ‘Bio-corridor’<sup>4</sup> is at the heart of regional conservation efforts and forms part of the 2.5 million hectare Gran Pajatén Biosphere Reserve. The scheme is operated in collaboration between a French carbon vendor, Pur Projet (henceforth ‘Pur’), and four core local organisations (amongst a much wider array of associations, groups and individuals involved) to deliver carbon credits to a range of companies which are seeking to offset their carbon emissions to meet consumer and staff demand or internal climate change goals.

At the heart of the project is a powerful argument that clients can reconcile the worlds of economy and ecology *within* their supply chains, to reform business practices and find an optimal balance between the production of goods and services for consumption and the protection of ecosystems. These goals will be analysed in detail over the following chapters through an empirical exploration of Pur’s interventions, tracing the actors and flows from a suite of agroforestry, reforestation and conservation projects in the Peruvian Amazon, through its influence on region-wide practices, to the sales and marketing process in Paris. By following the process of commodification, it will highlight the metamorphoses of trees

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<sup>4</sup> Conservation ‘corridors’ are an approach to conservation (or rhetorical device, Adams 2020) which focus on landscape and habitat connectivity, normally across a large area.

into timber and carbon, forests into plantations and farmers into green entrepreneurs, each with their own implications for the future of forest areas. While it covers many cross-cutting themes, it seeks to explore this emerging world of for-profit conservation with regards to three specific research questions:

1. How is value created and captured in for-profit conservation and reforestation projects on the voluntary markets?
2. How do the incentives and requirements associated with carbon offsetting on the voluntary markets change how the natural world is perceived and produced by actors involved in the project?
3. Can market-based, for-profit conservation and reforestation schemes deliver on their stated goals and balance economic and ecological demands?

Each of these questions aims to uncover the dynamics of production and the material and ideological impacts behind for-profit conservation, while moving beyond any simplistic analysis of these schemes being either a standard form of dispossession or an unproblematic means of bridging the funding gap for conservation. This chapter will elaborate on each respectively, situating the issues raised in the existing literature, but will first provide some context on the history and functioning of the voluntary market.

## **Carbon Offsets and the Voluntary Carbon Market**

Carbon offsetting was introduced as a policy priority in 1997 via the Clean Development Mechanism (CDM) and eastern European economies in transition (Joint Implementation) schemes that were established in the Kyoto Protocol as part of the UN Framework Convention on Climate Change (UNFCCC) (Bumpus and Liverman 2011). These schemes provided official mechanisms by which countries could meet their carbon emission reduction targets via paying for emissions reductions in other countries. This was seen as a win-win policy, reducing emissions in a more cost-effective manner while funding development projects. As noted by Bumpus and Liverman (2011: 128):

“The fundamental rationale conveyed by advocates of offsets is that paying for greenhouse reductions elsewhere is easier, cheaper, and faster than domestic reductions, providing greater benefits to the atmosphere and to sustainable development, especially when offsets involve projects in the developing world.”

The CDM introduced a range of measures to trade pollution rights (Lohmann 2010) and, in conjunction with experiences from various results-based forestry projects, served as the inspiration for REDD+, a payments for ecosystem services<sup>5</sup> (PES) scheme introduced in 2005 (as simply ‘REDD’). The “key idea” of REDD+ was “to make forests more valuable as carbon sinks than as suppliers of agricultural land and unsustainably harvested timber” (Angelsen et al. 2017: 718) and was expanded and formalised to include a range of forest management practices for emissions reductions in the 2007 Bali Action Plan.

REDD+ was popular from its inception, with a rapid growth in pilot projects and dominance in forest-based climate debates (Leach and Scoones 2015, Asiyambi and Lund 2020). Over 50 countries have (or have begun work on formalising) national REDD+ strategies (Duchelle et al. 2018), following over US\$10 billion of official funding “mainly from multi-lateral and bilateral aid agencies” (Angelsen et al. 2017: 718, see also Asiyambi and Lund 2020). This has resulted in over 350 official REDD+ projects (Duchelle et al. 2018), a number that, as will be shown through this research, is likely to vastly underestimate the number of projects set up, or being adapted, with this offsetting logic in mind.

The popularity of REDD+ comes from both its seemingly simplistic logic – compensating forest users for not cutting down forest – as well as its ability to combine multiple goals and conservation and development ‘wins’ under one banner (Richards and Lyons 2016, Fletcher and Büscher 2017). As noted by Asiyambi and Lund (2020: 11):

“From the outset, REDD+ was bolstered by significant global policy support and championed as an all-win scheme which could reduce carbon emissions while delivering a range of co-benefits including biodiversity protection, improved local livelihoods, improved forest governance, and investments in a green development pathway”.

Despite this popularity, REDD+ has been subject to significant criticism (Fletcher and Büscher 2017, Lund et al. 2017, Massarella et al. 2018, Asiyambi and Massarella 2020). Progress in establishing a global compliance market has been slow and disappointing, with results thus far from pilot projects at best ‘mixed’ (Duchelle et al. 2018) and at worst a

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<sup>5</sup> PES is the overarching term for schemes that aim to place a value on various ‘ecosystem services’ to allow for trading, offsets or profiteering from rights owned in ‘natural assets’.

complete failure (Asiyanbi and Lund 2020). But, while “[a] global carbon market has not materialized and is unlikely to emerge” (Angelsen et al. 2017: 718), voluntary markets for carbon are rapidly emerging to fulfil market demand for offsets. Arising in many cases “from frustration with the lack of state action—when governmental policies were perceived to be slow, inadequate, or nonexistent” (Bumpus and Liverman 2011: 132), voluntary markets allow companies that wish to offset their carbon to purchase verified credits. They have attracted official support from governments and supranational bodies such as the UNFCCC, with many countries developing systems to integrate these private schemes into longer-term national REDD+ compensation mechanisms, through the so-called ‘nested’ approach.

Despite these schemes being voluntary – and thus not a mandated requirement for businesses – carbon credits are often still verified by a recognised body<sup>6</sup> to offer an element of quality control and security to those purchasing them. While these verification standards vary, there are some commonalities which large carbon credit schemes should all adhere to and to generate what is known as a ‘Verified Emission Reduction’, a project developer must ensure that it meets the voluntary standards. These require that it is:

- Real: That there is evidence that the project actually removes or prevents emissions
  - Additional: That the emissions reductions would not occur without the project activities
  - Measurable: That the volume of these emissions reductions can be accurately measured
  - Verifiable: That a neutral, third-party auditor has verified the emissions reductions
- (adapted from Hamrick and Gallant 2018: 20)

This approach to quantifying carbon impacts relies on previous work in establishing metric tonnes of carbon dioxide equivalent – **tCO<sub>2</sub>e**. This provides a mathematical and financial basis for offsetting carbon generating behaviour by creating a commensurable figure that simplifies carbon emitted avoided or stored (Paterson and Stripple 2012, see also Lohmann 2010). For a credit of tCO<sub>2</sub>e to be traded, ownership rights to this credit must be granted, “discursively and legally privatising the tCO<sub>2</sub>e that [a] project is predicted to generate.” (Bumpus 2011: 619) and **requiring private ownership rights**. Various mechanisms and structures have been set up to facilitate this privatisation, whether through strict ownership

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<sup>6</sup> The largest and most prestigious verification group is Verra (previously The Verified Carbon Standard).

of the land on which projects are based, a lease on rights to conserve or simply a contract for the carbon, and often a blend of all three as will be shown in the case of the project being explored in this research.

Credits can then be sold directly to end buyers, or onto resellers and brokers before they are claimed as an emission reduction and retired (Hamrick and Gallant 2018). This process, shown in Figure 1.1, accounts for a great deal of the set-up costs – or transaction costs to use the favoured jargon of environmental economists – for voluntary market REDD+ schemes<sup>7</sup>.

**Figure 1.1 Project development process for carbon offset projects**



(Source: Hamrick and Gallant 2018)

Despite the slow pace of negotiations for government-backed compliance markets, voluntary markets for credits of tCO<sub>2</sub>e have been growing at an impressive rate. From 2005-2018 voluntary markets alone “helped to reduce, sequester, or avoid over 437.1 MtCO<sub>2</sub>e<sup>8</sup>” (Hamrick and Gallant 2018: 4). This means that, while there is as of yet no legitimate functioning carbon market, there is a *marketplace* and one with an increasing number of buyers and sellers. This is reflected in an increase in both the number of projects and the size of deals and actors involved – with supply of credits even outstripping demand in recent years (Salzman et al. 2018). This looks set to be boosted even further, with the recently founded ‘Task Force on Scaling Voluntary Carbon Markets’, led by former Bank of England governor Mark Carney, calling for a rapid expansion of global voluntary carbon offsetting to turn it into a \$100bn a year market (Hook and Temple-West 2020).

While credits from energy efficiency and fuel switching projects have thus far generated the largest number of issued offsets (633 from 2008-2018) and total volume of MtCO<sub>2</sub>e (127.9 from 2005-2018) – forestry and land use credits are becoming increasingly important. While it was once considered a risky offsetting mechanism (Carton and Andersson 2017), forestry

<sup>7</sup> Expenses which have often been factored out of the overall cost of these schemes (Nantongo and Vatn 2019)

<sup>8</sup> Megatonnes of carbon dioxide equivalent.

and land use was by far the highest contributor to MtCO<sub>2</sub>e in projects in 2018<sup>9</sup>, helping the voluntary markets reach seven-year highs in volume (Donofrio et al. 2019). This rapid growth was spurred on geographically by Latin American and the Caribbean, with the region's market share ballooning from 13% in 2016 to 37% in 2018. Furthermore, over half (57%) of the overall global increase in volume between 2016-2018 came from just one country, Peru – accounting for 86% of the overall 22.8 MtCO<sub>2</sub>e increase in volume from Latin America. Nearly all of Peru's growth came via REDD+ projects – and without Peru, global voluntary market REDD+ volume would have been virtually unchanged in the 2016-2018 period (Donofrio et al. 2019),

This rapid growth in the context of Peru – and the role of the emerging discourse on 'natural climate solutions' or 'nature-based solutions' which drove this growth (Donofrio et al. 2019) – raises the obvious question of what the country is doing to attract financing and develop these projects, and makes the Biocorredor Martin Sagrado REDD+ Project a critical case study for analysing how and why this growth occurred. This leads to the first research question on the nature of this privatisation.

## Privatisation and Creating Value

### *Research Question 1:*

*How is value created and captured in for-profit conservation and reforestation projects on the voluntary markets?*

My first research question largely pertains to questions of privatisation and how value is **created** and **captured** in the voluntary carbon markets. Despite a long history of the exploitation of 'Nature-as-commodity' (Peluso 2012), we are now seeing an acceleration and increasing emphasis on opening up 'new natures' for transformation into capital and markets (Kay 2016). PES schemes are emblematic of this transformation of nature, allowing all facets of life – from carbon (as in REDD+) and trees, to water and air – to be quantified and valued for their contribution in financial terms and made available on global markets. The ideological importance of this should not be underestimated as the exploitative nature of

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<sup>9</sup> Emission reductions were equivalent to 98.4 MtCO<sub>2</sub>e with a market value of \$295.7 million. This represents a 52.6% increase in volume and a 48.5% increase in value over 2016.

global capital has ceased to be seen as a threat to biodiversity but is increasingly being integrated in the very logic of saving it (Büscher et al. 2012).

As noted above, regardless of land ownership or the intention of project proponents, selling credits on the voluntary market requires a privatisation of a hitherto public (even if esoteric) good: carbon. As will be shown, this has resulted in a range of regulatory mechanisms to allow for the creation and trade in rights to the carbon sequestration potential of various, largely forested, areas. This requires the privatisation, not simply of land or trees, but the **future potential** of these elements to sequester carbon. From seemingly nothing, groups can spirit up a commodity to be sold to private companies via for-profit conservation, all in the name of ‘greening’ the world (Dempsey and Bigger 2019, Cohen and Rosenman 2020).

Private land deals to facilitate this abstraction of carbon – whether through a change in legal land rights or via management contracts for conservation or reforestation signed in exchange for carbon rights – are expanding at a global level and are being championed as a way to fill the funding gap for conservation and compensate local communities for lost potential revenues from areas of high conservation value (Angelsen et al. 2017). This trend will be termed **land adoption** here to cover the range of *de jure* and *de facto* systems that allow for carbon to be demarcated, commoditised and sold on global markets. At the core of these systems are a number of conservation projects which fall under the International Union for Conservation of Nature (IUCN) definition of privately protected areas (PPAs), or protected areas “under private governance”, by, for example, “individuals and groups of individuals; non-governmental organizations (NGOs); corporations – both existing commercial companies and sometimes corporations set up by groups of private owners to manage groups of PPAs; for-profit owners; research entities (e.g. universities, field stations) or religious entities” (Stolton et al. 2014: 12).

Despite rising academic interest in PPAs (Langholz and Lassoie 2001, Carter et al. 2008, Tecklin and Sepulveda 2014, Holmes 2015, Selinske et al. 2015, Owley and Rissman 2016, de Vasconcellos Pegas and Castley 2016, Shancee et al. 2017), outside of conservation’s largest NGOs there has been little work into who is purchasing these rights and looking to protect – and profit from – nature. The diverse forms of these interventions makes global figures difficult to produce, but there has been an undoubted rise of private finance and ownership

of conservation land (see Kay 2016)<sup>10</sup>. It has been noted, for example, that the number of PPAs has been rising significantly, chiefly in Latin America (Hora et al. 2018). Yet without clear agreement on what constitutes a PPA, particularly across jurisdictions with legal categories which transcend IUCN categories, comparable statistics are unreliable (Shanee et al. 2020). Nor do we know how funding flows operate – as they are often shrouded by complex international structures – and who benefits beyond the rhetoric of the green economy. In short, we know this trend is increasing, but why, how and involving who?

In Peru, while official ‘Private Conservation Areas’ cover just under 400,000 hectares (*Ibid*), as will be shown in the pages that follow, almost 2 million hectares have actually been ‘adopted’, not including more broadly defined adopted land, including reforestation schemes. This represents a large-scale privatisation, with an extraordinary range of actors involved in the readying of land for international deals, whether for the land itself, the carbon, or rights to conserve. Thanks to the lack of clear definitions and data on privatised conservation, however, there is little appreciation of this trend and, indeed, even the Peruvian state is unaware of many of these schemes.

This research seeks to explore the nature of this privatisation and, in doing so, also expand upon the literature on the production process in forestry carbon (Ekers 2015, Boyd and Prudham 2017, Carton and Andersson 2017, Palmer 2020). Following Ouma, Johnson and Bigger (2018), it aims to “get between” the M C and M’ of Marx’s formulation of the process of turning money into more money, by detailing the specific formation of and flows of value and capital within a for-profit conservation project. By exploring the individuals, groups and interests involved, it highlights **the importance of narratives** in generating value, through the buying and selling of credits and the distorting effects this can have on the socionatures it restructures<sup>11</sup>. As will be explored in detail, this requires a range of marketing and production techniques to create desirable credits – termed ‘charismatic offsets’ or ‘boutique carbon’ (Paterson and Stripple 2012) – adding value to carbon through a process of enrichment<sup>12</sup> (Boltanski and Esquerre 2016).

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<sup>10</sup> The extraordinary wealth of The Nature Conservancy (TNC) is but one example. By focusing efforts on land purchase and the accruing of land easement contracts, TNC has amassed assets worth over \$7.71 billion (TNC 2019).

<sup>11</sup> Here I use the term ‘socionatures’ – following other political ecology scholars (Braun and Castree 2005, Ekers and Prudham 2017, Carton 2020) – to encompass the intertwined relations of human and non-human natures.

<sup>12</sup> The theoretical aspects of this will be explored in the next chapter, but as elaborated by Fraser (2017: 61): “Consisting largely in narrative, the ‘work of enrichment’ involves recounting a past that endows the object in



In exploring this process, this research highlights the importance of understanding ownership and narratives in carbon offsetting projects and asks what this can tell us about who has the right to create and capture value within the voluntary markets. The second research question looks at how socionatures are produced in this context – and the impact this has on the landscape and the people who inhabit it.

## The Production of Nature

### *Research Question 2:*

*How do the incentives and requirements associated with carbon offsetting on the voluntary markets change how the natural world is perceived by actors involved in the project?*

In her study of a carbon forestry project in Chiapas, Mexico, Osborne (2015: 71) notes that carbon markets not only require well-defined property rights, but that the technical process of abstracting these rights means that “carbon producers [...] begin to see their land in new ways—as a type of discretely and privately owned property”. This 'rendering legible' (Scott 1998) of the land, the landscapes it engenders and the view of the natural world it promotes – and produces – will be a central focus of this research.

Questions of how landscapes are being transformed and how global commodity flows work through nature are of course, not new. Conservation has been tied up with the imaginations, dreams and desires of the powerful from its inception, from British aristocrats creating protected areas in African colonies (Neumann 1998) to the coming together of idyllic landscapes and notions of the sublime, particularly on the American frontier (Cronon 1996). More recently, theorists have mobilised ideas around the production of space and the production of nature to analyse how specific socionatural formations are created – or how capital ‘works *through* nature’ (Moore 2015) to produce specific ecosystems that favour the accumulation of capital (Smith 1990, Smith 2007, Ekers and Prudham 2015, Carton and Andersson 2017).

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question with historical significance—hence, with particularity, originality, uncommonness, and distinctive provenance”.

The second research question looks at how ideas of agroforestry, reforestation and conservation are combined in the project in an attempt to optimise the landscape to deliver the maximum amount of ‘services’ to local populations. This logic builds on the growing discourse of ‘land sparing’, an approach to conservation which compensates for the expansion opportunities offered by protected areas with increased production through the intensification of agriculture (Perfecto and Vandermeer 2010). Typically, this involves the designation of certain areas as strict exclusion zones or reserves alongside areas of intensive agriculture, as well as often including buffer or transition zones with hands-on ecosystem management (Oliveira and Hecht 2016, Adams 2020). Increasingly, each of these areas is designed for their greatest delivery of goods and services, including, as will be shown here, those focused on eco-system services.

This approach carries with it an inherent restructuring of socionatural relations. In the case in question here, it leads to unique – and at times stark – landscapes of production. Plantations are harvested for timber or integrated into agroforestry systems, with agricultural production integrated into conditions that are meant to “more closely mimic natural forest” (Clough et al. 2009: 197). However, while trees may well be planted and plots match official definitions of forest in terms of height, crown coverage and area, to stroll through these areas is to witness a new kind of forest, with rapid-growth species planted in neat rows, trimmed undergrowth and an eerie silence in place of the normal competing sounds of the wildlife of the Peruvian Amazon. Within the space of a few miles in Peru one can stroll through areas that are both alike in density of trees and yet while one is teeming with other life – undergrowth, insects, birds and amphibians, and everything in between – the other carries all the hallmarks of Western agri-industrial intensification, clean, neat rows of uniform clones, picked and pruned to deliver maximum benefits, and grown for a specific goal. In this case carbon.

To explore these new landscapes of productive and profitable conservation, this research will add to a growing literature theorising the production of nature for carbon markets (Ekers 2015, Boyd and Prudham 2017, Carton and Andersson 2017, Palmer 2020) to show how nature-based solutions lead to a view that nature can – and should – be treated like the grey infrastructure of cities – controllable, predictable and suitable for optimisation. This connects the research with an emerging literature on (and logic of) ‘green infrastructure’ – that is, nature as “a strategically planned network of natural and semi-natural areas with

other environmental features designed and managed to deliver a wide range of ecosystem services” (European Commission 2013: 7). While to date this is a concept that has mostly been applied to trees, parks and other providers of green goods and services in urban settings, here it will be applied instead to rural forests. Green infrastructure has at times been seen as synonymous with nature-based solutions (Nesshöver et al. 2017) and this research will show the common logic behind this view of the natural world, which in practice favours the simplified, repetitive and manageable landscapes of plantations. As noted by two proponents:

“Nature is no longer solely seen as a source of commodities to (temporarily) relieve an economic crisis, but inspires more systemic economic solutions. From a systemic viewpoint, a natural system consists of highly productive and interconnected subsystems thriving exclusively on renewable energy while producing and recycling goods in a highly effective way. These ‘ecosystems’ evolve to diverse but locally optimal equilibriums between productivity, adaptability, and resilience” (Maes and Jacobs 2017: 122).

This framing of the natural world risks underestimating the unruly ecology and economic uncertainty that can arise from the agro-industrial approaches that nature-based solutions are beginning to resemble in the forests of San Martín. Drawing also on insights from the ‘ethnography of infrastructure’ (Star 1999, Dourish and Bell 2007, Venkatesan et al. 2018), this allows the research to question the role ‘nature as infrastructure’ plays in (re)structuring local socionatural relations.

Through a reading of the landscapes being created for modern visions of environmental sustainability, this research will thus explore the production of nature engendered by for-profit conservation and how nature-based solutions shape landscapes of power, access and productivity. This will, in turn, provide the basis for the third research question into what the prospects of long-term success is for these schemes – and what such a production of nature reveals about the role of ideology in for-profit conservation.

## **Reconciling Economy and Ecology**

### *Research Question 3:*

*Can market-based, for-profit conservation and reforestation schemes deliver on their stated goals and balance economic and ecological demands?*

This, final research question broadly addresses the issue of whether Pur's work in the Huayabamba Valley delivers on REDD+'s promise of a 'triple win' of biodiversity conservation, local development and the mitigation of global carbon emissions (see Richards and Lyons 2016, Fletcher and Büscher 2017). More specifically, however, it asks whether attempts to chart new paths for development which reconcile economy and ecology will become mired in the same contradictions of capitalism.

Much of the critical literature regarding the role of nature in the global economy relates to its role as a function of neoliberalism, chiefly in the concept of neoliberal nature (Castree 2008a, Castree 2008b). Neoliberalism, loosely defined here (although see Chapter 2 for an extended discussion on this), is the process of "open[ing] up new fields for capital accumulation in domains hitherto regarded off-limits to the calculus of profitability" through the "corporatization, commodification and privatization of hitherto public assets" (Harvey 2006: 44) and can be seen in the core logic of PES, REDD+ and the other schemes relying on this commodification and privatisation of the natural world.

The literature on neoliberal nature has spawned a range of critiques of the financialisation of nature and the increasingly important role of the business world in steering conservation policy (Holmes 2011, Sullivan 2011, Büscher et al. 2012, Igoe 2013, Büscher et al. 2014, Holmes and Cavanagh 2016). This has helped to show not just the rise in funding from big business, but critically, the adoption of business discourses and the involvement of business leaders in conservation research and practice (Brockington 2009, Holmes 2011, Büscher and Fletcher 2015). This research will explore this dynamic in how ideas, narratives and discourses travel across the project and beyond.

Investigating the webs of actors and discourses in this way adds nuance to claims that for-profit conservation is either a new wave of corporate enclosures or simply an opportunity to empower local communities and pay them to 'steward' the natural world, and probes instead at how it reflects the ideologies of those buying and selling carbon credits. Here, we can begin to understand the allure of these visions and the power they hold for the actors involved. As Nancy Peluso (2012: 80) has noted for conservation itself: "modern fairy-tales and social relations together have rendered conservation [...] a magical, transformative commodity". It is these 'fairy tales' that facilitate offsetting that require an ever-greater focus

– analysing the drives and desires behind the emerging webs of transnational actors and the ideology behind utopian visions for the future of the forests.

Seeking to understand ideology in this way also means taking the goals of Pur Projet and the Biocorredor Martin Sagrado REDD+ Project (of reconciling economy and ecology) seriously, rather than dismissing it as a fickle attempt to mobilise climate change discourse to open up new valuable markets. Indeed, Pur Projet has not only been through a rigorous process to show that it is ‘not for profit maximisation’<sup>13</sup>, but in my experience its workers also denounce the ills of the neoliberal model of growth. The ‘quixotic fools of imperialism’ these are not.

This third research question goes beyond concepts of neoliberal nature to ask why certain conservation schemes rely on a capitalist model while simultaneously disavowing it. In doing so, it attempts to shed greater light on the paradox that "capitalism is now seen as the grand saviour of its own negative ecological contradictions" (Büscher and Fletcher 2015: 274). While it will add to “claim[s] that capitalism is not only killing the planet, but that the geopolitical arrangements it enshrines are what is preventing us from taking necessary action to save it” (Seaton 2019: 124), it also looks at how ecological critiques of capitalism are being integrated into it and how justifications (per Boltanski and Chiapello 2018) for the current economic models are **changing**. This approach suggests that, as the global economy sees ever greater shocks and stresses, and the shaky ground on which neoliberalism has been justified seems to be ebbing away, projects in the ‘green economy’ may well help to suggest what might come next rather than just reflect what has come before.

## Structure

To explore these questions, the investigation proceeds as follows. Chapter 2 situates this study within the wider body of literature on the political ecology of forests. This literature will be separated into three categories. Firstly, the literature from **historical** political ecology which seeks to address the evolution of conservation over time and links this to wider political and ideological projects. This literature has shown the very contingent nature of both how we view the natural world and how different groups have mobilised ideas,

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<sup>13</sup> In registering as a ‘B-Corporation’.

discourses and approaches to ‘protect’ it. Secondly, I examine the literature on how the currently dominant paradigms of conservation are spreading **spatially**. Drawing on the work of scholars exploring neoliberal nature and green grabs, this literature analyses how new approaches to conservation integrate it into wider webs of capital and power, particularly through market-based instruments such as PES and REDD+. Thirdly, and drawing on a broader range of disciplinary literatures, I consider research on **ideology**, infrastructures and the production of nature that seek to understand people’s motivations and justifications for profit-generating activities. This work looks at the wider role the natural world plays in reflecting the dreams and desires of actors in for-profit conservation.

Chapter 3 introduces the case study in more detail and the methodology that the research follows. This will also draw together the insights from Chapter 2 to highlight the theoretical framework being employed and how that impacted data collection. In doing so it highlights the positionality of the researcher and the research and some of the limitations of the conclusions the research is able to make.

Chapter 4 is the first of the thesis’s four empirical chapters and focuses on the production of carbon: the process by which carbon is found, privatised, and produced and sold as a commodity for the market. This will frame the specific requirements of the market and introduce some of the key structural issues within the project that will be investigated in chapters 5-7.

The second empirical chapter (Chapter 5) will look at the production of nature: how the idea of land-sparing promoted in San Martín pushes a radical separation of protected areas and productive land, asking nature to work harder on the frontiers. This offers a very specific form of development to local communities, through commodity crop production supplemented by reforestation for the growth and trade of timber in sustainable logging systems.

Chapter 6 then probes the work of conservation in this context: how the natural world is viewed and valued to deliver on the development and market goals established in Chapter 5. By providing empirical observations of what actually constitutes a conservation project in the context of the Biocorredor Martín Sagrado REDD+ Project, this chapter will begin to

introduce some of the potential side effects of taking too utilitarian a view of the natural world.

Chapter 7 turns to consider the selling of ‘success’ and shows the importance of building and sustaining narratives in the project and how these narratives can begin to take on a life of their own in different contexts of regional promotion and international marketing. By showing how the success of Biocorredor Martin Sagrado is promoted and, in turn, how failure is obscured this chapter will detail how this success is produced and travels through various parts of the project.

Chapter 8 will offer some conclusions from the evidence presented, returning to the core arguments and research questions introduced here to analyse the potential impact of for-profit conservation, both in the context of this project and in its wider context as a mechanism for offsetting and reconciling the worlds of ecology and economy.

This combination of empirical evidence and ideological analysis will bring to light the barriers and contradictions to the stated goals of offsetting, and the limitations to market-based approaches, but also ask broader questions of how current trends of for-profit conservation and nature-based solutions are remaking forests. Such an approach will provide a novel view of how privatisation and offsetting are impacting the production of socionatures across the world and an original theorisation of the complex and evolving relationship between capital, carbon and forests.

## Chapter Two: The Political Ecology of For-Profit Conservation

This chapter locates the research within literature from the field of political ecology. Political ecology “rests on the dialectics of Nature and Society” (Watts and Peet, 2004: 17), that is, how socionatures are constructed and reconstructed “through an analysis of the politics and political economy of environmental change across multiple scales” (Osborne 2015: 67). This is an undoubtedly broad purview and has led to multiple approaches, definitions and research foci resulting in “an eclectic approach to research on environmental change” (Davis 2009: 285).

While political ecologists cover many themes, questions of power and control, ownership and exploitation and “the entanglement of local concerns with wider governance and market forces” (Doolittle 2015: 515) are central. These areas require a critical position with regard to the framing and management of socionatures, “seek[ing] not only to describe that which is observable and measurable in the environment, but also to understand that which is not observable, namely, the less visible social, political or economic structures and processes” (Doolittle 2015: 516). This means that the field, by its nature, has a methodological and disciplinary pluralism (Doolittle 2015). This is increasingly so given the growingly interconnected problems it seeks to tackle which “*demands* a novel interdisciplinary perspective” (Delgado Ramos 2017: 187).

Political ecology thus draws upon insights from parallel fields of study, which is particularly important when covering issues such as carbon markets and the involvement of for-profit companies in conservation. As noted by Osborne (2015: 67), “[a] political ecology approach that engages with the literatures of the commodification and neoliberalization of nature and that gives serious attention to political economy, the materiality (biophysicality) of resources, and power relations is critically important for constructing a more robust understanding of climate governance across multiple scales”.

Furthermore, the focus on exploring different socionatures and socioecologies means that political ecology is able to draw on experiences, knowledges and ontologies from outside of academia. While to date “Anglophone political ecology has been built in an academic enclave insufficiently open to intercultural dialogue between regions and with the protagonists of



[the field]” (Leff 2017: 137), there is an opportunity to embrace plural voices and experiences, connecting with wider debates on the “hegemonic power of the rationality of modernity that dominates and exterminates difference” (Leff 2017: 157).

This chapter follows this approach, bringing together strands of research from across political ecology and beyond. It does so across three, broadly delineated sections, roughly corresponding to insights from historical, spatial and future-oriented perspectives that this research addresses. The first of these refers to the literature on historical political ecology, “arguably one of the least visible of the widely recognized research areas within political ecology” (Davis 2009: 285) and crucial to grounding current approaches in longer-term trends and approaches to framing and enclosing (or attempting to enclose) socionatures. The second looks at the current expansion of neoliberal conservation, connecting with the literature on political economy and political ecology which explores the geographical spread and discursive framing of natural capital and other neoliberal approaches to the natural world. And, finally, the third section will explore literature on ideology, infrastructures and the production of nature, to highlight how the dreams and desires of actors within carbon markets and for-profit conservation mobilise certain framings of the future which could foreclose opportunities for embracing diverse and plural socionatures and ‘political ontologies’ (Leff 2017).

## **Historical Political Ecology**

Historical political ecology situates the management and conservation of forests in a historical context and considers how they have been used to reinforce specific formations of power and ways of seeing the natural world. This literature has shown how the history of forestry and conservation – how we view and use the forest – is inherently tied to questions of ideology and power.

This section will thus emphasise that “political ecologists need to combine historical and contemporary analysis if they are to understand how political forests [...] represent an enduring if flexible tool of ‘forest’ politics” (Vandergeest and Peluso 2015: 174) and why this matters to the research that follows. It will do so by introducing the concept of political forests, followed by a brief history of protected areas and state-led conservation projects, before exploring how scholars have located the current trend towards non-state groups

involved in conservation within this context, and discussing how this research will mobilise and add to this literature.

### **Political forests**

The concept of ‘political forests’ was introduced by Peluso and Vandergeest (2001) and has brought together a field of research which shows that “forests are never entirely natural: political forests are created and always in the process of being created through politics and cultural ways of seeing, as well as through “nature’s agency” or biological, ecological, and socio-natural processes (Peluso and Vandergeest 2020: 1089)”.

This framing highlights the historical role of different management and control regimes, showing that “contemporary political forests are defined by the scientific, bureaucratic and institutional practices of forestry” (Vandergeest and Peluso 2015: 162). This approach emphasises “the socio-political dimension of the (re)- production of land-use zones and species as ‘forests’ (Marijnen and Verweijen 2018: 1) and shows how our conceptions of forests are always contingent on wider ecologies of power and ideology.

The history of political forests have been defined across three specific ‘moments’, broadly speaking “colonialism, post-colonial independence, and counter-insurgency struggles<sup>14</sup>” in which “colonial and post-colonial states made and remade forests as a means of territorialising power” (Devine and Baca 2020: 912) and a fourth, current, moment in which diverse groups have challenged states’ monopoly on the control of forests.

The starting point for these – and many parallel studies – is the emergence of the sustainable management of forests in 18th century Germany and the process of standardisation and the monitoring of production and extraction to guarantee the flow of timber to nation-states (Scott 1998). This idea has been explored by various scholars looking to expose the ‘rational’ state approach to managing forests and ‘rendering legible’ the landscape (Scott 1998, Cavanagh et al., 2015, Dunlap 2015, Bocarejo and Ojeda 2016); expanded upon by Parenti (2015: 834): “to deliver nature to production the state must continually measure, describe,

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<sup>14</sup> This section does not follow these ‘moments’ separately, but the case could certainly be made for Peru following a similar trajectory.

categorize, represent, and scientifically render legible and accessible the powers of biophysical reality”.

The seizing and control of forests became both a tool of control within state boundaries, such as in France (Bonneuil and Fressoz 2016), England (Thompson 1975) and Germany (Scott 1998), and a critical element of empire-building, as “this European idea of “modern” forestry was spread all over the world and served as an essential discourse for colonial powers” (Winkel 2012: 88). Although, as Devine and Baca (2020: 921) rightly point out, “[s]cientific forestry has never been homogenous nor universal”, colonial regimes in Southeast Asia (Peluso and Vandergeest 2001, Vandergeest and Peluso 2015), India (Grove 1996, Agrawal 2005) and Africa (Fairhead and Leach 1996, Neumann 1998) reinforced regimes of exploitation, while attempting to remake socio-ecological relations on the ground, with consequences that resonate in conceptions of sustainability and forestry today. It is in this combination of scientific forestry integrating with colonial regimes “that the creation of political forests as an idea and a set of practices initially gained considerable traction [as] scientific forestry and forest territories were elaborated through a series of legal and technical models in various colonies and forests while articulating with pre-existing local practices and local colonial politics” (Vandergeest and Peluso 2015: 168).

These processes, relying on scientific understandings of the forest, reinforced a specific way of seeing the landscape as rational and ‘to be developed’ by the state. As noted by Hetherington and Campbell (2014: 192) “Part of what was at stake here was all about visibility, about establishing the hand of human intervention in areas that were considered too “natural” and therefore developmental failures”. This was to the detriment of alternative knowledges and ways of living within the natural world and various authors have shown how ongoing efforts to render legible the frontiers have been inherently tied to the project of controlling subjects and “ultimately creat[ing] a new kind of citizen: civilized, productive, and observable” (Neumann 2004: 186); an ideal citizen which carries with it its implied binary opposite, that of the barbarian, uncivilised other in need of being modernised<sup>15</sup>. This led to Malthusian narratives of degradation caused by rural populations which, as detailed by Fairhead and Leach (1996) in the case of West Africa, often ‘misread’ the real dynamics of landscape creation.

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<sup>15</sup> See particularly, Scott (2014) Chapter 4: ‘Civilization and the Unruly’, for an extended discussion of this through the idea of ‘cooked’ and ‘raw’ citizens on the Chinese frontiers.

Entrenched identities of forest-dwelling communities live on in conservation and development work, often having the impact of “imposing culturally arbitrary distinctions and symbolic differentiations between communities or ethnic groups” (Holmes and Cavanagh 2016: 206). While the idea that ‘civilisation’ must be extended to all is still maintained through some development work, the figure of the ‘noble savage’ has been broadened out significantly in recent years. Conservation schemes, however, still mobilise ideals of indigenous identities, ‘forest guardians’ or ecosystem gardeners. These conceptions of homogenous groups of good or bad forest dwellers rarely bear up to reality (Fletcher et al. 2018, Killick 2018, Killick 2020), but are instead put to work by various actors to achieve certain goals (Hippert 2011), with claims to ‘greenness’ becoming ever more valued.

While the research deploying the concept of ‘political forests’ is largely centred on South and South-East Asia, the Peruvian Amazon is equally emblematic of how specific ideals of modernity have been mobilised and value placed on forested landscapes. Early Spanish explorers – in many cases driven by the legend of El Dorado and the ‘Lost World’ (Slater 2015) – along with missionaries, who made numerous trips into Peruvian Amazonia, left a lasting impression of immense wealth in 16th and 17th-century reports back to Spain (and a legacy of European diseases and subjugation for local populations (Shepard et al. 2010)). The reports sent back only added to the interest in Peru sparked by vast amounts of precious metals (chiefly gold and silver) plundered from towns across the country and the well-developed road and mining network which would make further extraction possible (Bury and Norris 2013). If these initial accounts provided the impetus and incentive to stake claim to the forests of Peru, the late 19th century provided the first waves of capital-driven commodity booms that once again triggered interest in the frontiers and forests. In Peru, a rise in international demand for copper, silver and gold, spurring an increase in production (Bury 2005), and the Rubber Boom of 1895-1917 (Shepard et al. 2010, Peluso 2012), raised international interest in the country’s natural resources.

While this early history of the Peruvian Amazon might be best understood as the need to secure and desire to plunder the frontiers, over history, it has rapidly become seen not just as a place of enormous value, but also of missed potential for development. Successive regimes of rubber tapping, hydrocarbon mining, agricultural expansion and internal migration have characterised the ongoing efforts to capture the vast potential wealth of the

region and its forest. In the wider Amazon, this was epitomised by the Brazilian government's *Marcha para o Oeste* (Westward March) strategy of the 1930s and 1940s to modernise the forest (an approach that was replicated in many states including Peru, as we will see in Chapter 3). This grand scheme of modernisation “saw the Amazon as a stubborn giant that must be transformed into a wellspring of profitable resources” (Slater 2015: 6).

Critically for our understanding of current approaches, it was against this large-scale exploitation that the modern conservation movement emerged. As noted by Nancy Peluso (2012: 86): “the justification for establishing parks, reserves and other wildlife and habitat preservation strategies rested on the idea that capitalist exploitation had caused major losses in Nature”<sup>16</sup>. This view of conservation casts nature as ‘in peril’, rapidly disappearing and in need of being saved – with excessive consumption as the chief cause. And, as we shall see, these conservationist understandings of forests, also carry their own particular notions of what forests should look like.

Denaturalising the concept of forests and the role of the state, as in the literature of political forests, connects conservation to a longer history of how the natural world was imbued with specific value and historical processes of commodification and dispossession. It also makes clear that, far from being a neutral or apolitical pursuit, forestry (whether for production or conservation) has always been tied to concepts of modernity and development and has a history littered with misrepresentations of rural populations and non-human natures. This is a history mirrored – and inherently tied to – the state’s role in conservation.

### **The evolution of conservation approaches**

While there have been numerous ways that conservation actors have sought to protect biodiversity, the dominant method throughout history has been protected areas. Protected areas come with various legal statuses, regimes of use and methods of monitoring, but all rely on a combination of science, governance and economics to create and sustain them (Neumann 2004, Adams et al. 2014).

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<sup>16</sup> Conservation clearly outdates the *Marcha para o Oeste*, but this type of extractive regime is characteristic of early targets for a coordinated transnational conservation movement.

The earliest approaches to formal conservation regimes came out of colonial rule and were driven by the preservation of forests for timber supply or soil and water conservation (Grove 1996)<sup>17</sup>. However, as the state has traditionally been at the heart of the creation and management of protected areas, hunting reserves and national parks, many scholars point to these as logical starting points for analysis. Büscher and Fletcher (2015: 283), for example, put the start of the “current global expansion of conservation” at the creation of the US National Parks system and specifically the formation of the Yellowstone National Park in 1864.

Yellowstone is a frequent point of reference for scholars (Adams 2020) thanks to its influence on the development of national park systems globally and its clear state-led, ‘fortress conservation’ approach (Büscher and Fletcher 2015). This approach to protecting land – also known as the ‘fences and guns’ method of conservation – involved the strict separation of humans and nature and was perhaps the signal feature of the early stage of conservation, with protected areas “legitimated by narratives about the preservation and scientific conservation of wildlife and natural resources” (Kelly 2011: 686). This framing of nature – to be protected from unruly human populations – was used as a way to enforce the power of the state, while subjugating or forcibly displacing various groups in the biodiverse jungles and uplands (Büscher et al. 2012, Scott 2014, Büscher and Fletcher 2015, Holmes and Cavanagh 2016). As such, the model reinforced power relations and the wealth of certain individuals (Neumann 1998) at the same time as it excluded local populations (Grove 1996, Kashwan 2017).

The framing of fortress conservation was seen as a “blueprint cookie-cutter approach to protected area creation” (Büscher and Fletcher 2015: 283), which through a monumental effort of mapping, quantification and management allowed it to spread deeper into territories and across the world, reaching out from the US and Europe through to colonies and postcolonial regimes (Grove 1996). This process saw state-led fortress conservation combined with the sustainable management of forests (Vandergeest and Peluso 2015) and game laws or hunting reserves (Perelman 2007), forming the basis of an early global conservation approach (Büscher and Fletcher 2015).

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<sup>17</sup> This was preceded (and continues to be supplemented) by numerous informal conservation approaches.

With changes to the prevailing global political economy, this strict separation and control became increasingly untenable and multiple failures have pointed to the limitation of “the capacity of states to coerce their citizens into unpopular development and conservation programs” (Agrawal and Gibson 1999: 632). This has led to sustained academic interest and critique on the role of ‘coercive conservation’ (Li 2007), which, beyond the failings of the state, began to question the simplistic understandings of “pristine environments untouched by human hands” (Agrawal and Gibson 1999: 632) and the local communities that inhabited them (*ibid*).

As with the literature on political forests, these critiques question the narratives of the otherness of the natural world that were mobilised in the creation of conservation schemes. Multiple scholars have questioned the ‘naturalness’ of areas that have been portrayed as free from human influence, perhaps most notably in Cronon’s (1996) critique of the concept of wilderness. This research has upended ideas of untouched, ‘virgin’ forests to show the role of communities in shaping ecologies and creating anthropogenic forests (Denevan 1992, Fairhead and Leach 1996, Hecht and Saatchi 2007, Heckenberger et al. 2007). The Amazon is again a prime example here. Hecht’s work (2013, 2014a, 2014b), for example, shows how, far from being an untouched paradise, the Amazon has been heavily populated and shaped by human populations. This has also been traced in the well-developed and long-distance trade routes and links throughout the region historically (Lathrap 1973, see also Varese 2004) and the development of ‘*terra preta*’ or dark earth, the rich, fertile soil created by human activity which has added to the Amazon’s diversity (Heckenberger et al. 2007, Leach et al. 2012, Balée 2013).

Thanks to these critiques and a wider loss of legitimacy, fortress conservation has gradually lost its hegemonic status in favour of various models of conservation based on principles of participation, community inclusion and combined goals for conservation and development, which began to emerge from the 1980s (Büscher and Fletcher 2015). This participatory turn came following many years of criticism and a general opening up in development work more broadly (see Kapoor 2005, Nadasdy 2005) and brought a range of new ideas, acronyms and fads – particularly integrated conservation and development projects (ICDPs), Community Based Natural Resource Management (CBNRMs) and co-management areas (Büscher and Fletcher 2015).

These more ‘plural’ conservation schemes – what has been termed the era of ‘flexible conservation’ by Büscher and Fletcher (2015) – have not been free from criticism in how they employ similarly simplistic conceptions of the natural world and rural populations. Various researchers, “in the role of friendly critics” have challenged “the simplified proposition that communities manage forests, point to the variability of conditions and highlight the risks of homogenizing or idealizing complex practices” (Li 2007:275). These critiques have often praised the model’s improvements on top-down approaches while highlighting its limitations (e.g. Ward et al. 2018). This includes a tendency to treat local communities as homogenous (Agrawal and Gibson 1999) and interventions as replicable (Tanner and Allouche 2011), the increasingly ‘anti-political’ nature of interventions that silence dissent and co-opt more radical calls for change (Nadasdy 2005, Büscher 2010, following Ferguson 1990) and a failure to understand the inherent inequality of development projects<sup>18</sup> (Pokorny et al. 2012). These critiques will be explored at greater length in section two of this chapter, but they have provided a range of new critical tools for understanding interventions, including the new actors that flexible conservation has brought with it (Büscher and Fletcher 2020).

### **The rise of private actors and market-based mechanisms**

The move away from state-centred, fortress conservation has not just seen increasing participation from non-state actors, but also their involvement in ownership and management. This has brought a range of new actors into the realm of formal conservation, from farming communities and NGOs to private investors and companies – and with them a range of new approaches, tools and ideologies. Vandergeest and Peluso (2015) have referred to this marked shift away from predominantly central state control to the increased importance of non-state actors as the fourth moment of ‘political forests’. As expanded by Devine and Baca (2020: 915):

"this fourth moment is marked by the rise and role of non-state actors producing and managing political forests, in particular, “non-profit”, “non- governmental” conservation organisations [...] [and] is distinguished by the hegemony of sustainable development, climate change mitigation, and biodiversity conservation as the means and end of political forestry".

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<sup>18</sup> Particularly through the pervasive language of triple-win narratives, where people, the planet and profit supposedly all benefit (Holmes and Cavanagh 2016).



The coming together of actors and ideas means that forest management schemes have been explored with reference to how they reflect the unique ‘assemblage’ of those involved. Li (2007) has traced this in practice to a series of ‘practices of assemblage’ which integrate into localities in the formation of parks and projects – from forging alignments between actors and ideas, rendering technical the complexity of the socioecological context, authorising specific knowledge (or knowledges), reposing questions in anti-political, technical terms and reassembling old and new elements to unite actors behind an intervention. This has helped scholars of the political economy of forests to understand the processes of compromise and conflict that shape eventual project dynamics (e.g. Nel 2017) and how “interventions are assembled from an existing repertoire, a matter of habit, accretion, and bricolage” (Li 2007: 265). While this has been the case through the history of political forests (see above), it highlights how the broad range of new actors involved in conservation in this ‘fourth moment’ can influence approaches with the ideas and ideologies they bring with them, specifically through market-based mechanisms, such as payments for ecosystem services.

This new world of neoliberal conservation – or green neoliberalism as Devine and Baca (2020) have labelled the fourth moment of political forests – will be expanded upon in the next section of this chapter, but as noted by Marijnen and Verweijen (2018: 1) “[t]his development away from predominantly state-controlled political forests parallels and converges with similar transformations in the domain of protected areas”. These transformations can be seen in the rise of diverse governance and management regimes of protected areas – and chief among them communal reserves and the privately protected areas (PPAs) which are central to this research.

### **Privately protected areas**

As noted in the introduction to this thesis, the IUCN defines PPAs as areas protected by “individuals and groups of individuals; [NGOs]; corporations – both existing commercial companies and sometimes corporations set up by groups of private owners to manage groups of PPAs; for-profit owners; research entities (e.g. universities, field stations) or religious entities” (Stolton et al. 2014: 12). This private governance is notably distinguished from governance by indigenous peoples or local communities, where conservation is conducted on these groups’ lands (Borrini-Feyerabend et al. 2013).

While PPAs have existed in a variety of forms for centuries (Alderman 1994, Langholz and Lassoie 2001), such as in hunting reserves mentioned above, their recent expansion, that is captured by the wider fourth moment in political forests, has been significant (Brockington et al. 2008, Carter et al. 2008, Stolton et al. 2014, Kay 2016). PPAs now protect millions of hectares globally (Stolton et al. 2014) giving their advocates a significant role in setting wider discourses in conservation. This has led to an increasing amount of academic attention on the role and growth of PPAs (Langholz and Lassoie 2001, Carter et al. 2008, Tecklin and Sepulveda 2014, Holmes 2015, Selinske et al. 2015, Owley and Rissman 2016, de Vasconcellos Pegas and Castley 2016, Shanee et al. 2017). This is particularly the case with Latin America (Hora et al. 2018) and Africa (Bond et al. 2004, Carter et al. 2008) where their expansion has been marked.

Global figures, however, have been elusive. While there have been attempts to make global calculations of the amount of land which falls under these private governance schemes (Stolton et al. 2014), they inevitably find comparing definitions and data which vary across jurisdictions challenging (see Shanee et al. 2020). Part of this confusion comes from matching up the unique national legal systems which define protected areas and conservation land with the broad definition provided by the IUCN, as well as what falls within the discourse of ‘governance’ and/or ‘co-management’. Ward and colleagues (2018: 1) highlight the importance of this differentiation, where “governance refers to who holds the power, authority and responsibilities, whereas management refers to resources, plans and actions”.

Regional analyses – for example of PPAs in Africa (Carter et al. 2008) and Latin America (Monteferri and Coll 2009, Hora et al. 2018) – provide wide-ranging estimates despite using the same core definitions of PPAs. Currently, in the literature which references Peru, there is significant difference in interpretation of what should be counted as a PPA, one study for example, claims PPAs in Peru cover just 564,536 hectares and have no legal basis (Hora et al. 2018), while another suggests that they cover almost one million hectares in just five of the country’s regions (Mitchell et al. 2018: 77)<sup>19</sup>. This makes the compiling and comparison of global figures for the amount of PPAs extremely difficult (Stolton et al. 2014).

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<sup>19</sup> As will be elaborated below, in part this is due to Peruvian law, where in contrast to the IUCN definitions, what is ‘private’ or not has more to do with the legal status of the land than the management scheme (Shanee et al. 2020). Many Peruvian National Parks have governance structures which permit control by private groups, but clearly would not fall into the category of PPAs.

National (or dual-country) studies add depth and understanding to this. Pellin and Lima Ranieri (2016) have shown the diversity of approaches and overall data in Brazil (see also de Vasconcellos Pegas and Castley 2016), Bond and colleagues (2004) provided a more comprehensive dataset for South Africa, and Carter and colleagues (2008) usefully explored the difference in approaches and headline number of PPAs in Kenya and Tanzania. Chile, however, has received the greatest amount of academic attention when it comes to PPAs (Holmes 2014, Tecklin and Sepulveda 2014, Holmes 2015, Serenari et al. 2017), in large part thanks to several high-profile land deals involving the founders of the Patagonia clothing company Kristine McDivitt Tompkins and Doug Tompkins. These studies have shown the complexity of analysing PPA deals in the national context, uncovering some of the dynamics behind this global trend, specifically the motivations of those involved and whether the outcomes are positive or negative for wider conservation goals.

While some scholars have highlighted the positive aspects of PPAs – in bridging the funding gap for conservation (Bond et al. 2004, Clements et al. 2019) or as a way of providing ownership and control to local groups who would otherwise be excluded or marginalised by large-scale conservation projects (Horwich et al. 2010, Shanee 2013) – they are not without their critics. Li (2007: 286) in particular highlights the potential for new PPA legislation to lead to wide-scale disposessions, with NGOs “buying up large tracts of forest land or acquiring long-term ‘conservation concessions’ in which they can do as they please and neither communities nor forest bureaucracies have any say”. This has led to many studies focusing on large NGOs and wealthy individuals, which may give a very specific view of the type of disposessions or privatisations occurring in practice (see, for example, Tecklin and Sepulveda 2014, Busscher et al. 2018).

PPAs, however, do not neatly fit into a specific framing given the range of motivations, methods and actors involved. While "the conservation of private lands using easements or protected areas is often represented as a prime example of this market-based tendency" (Tecklin and Sepulveda 2014: 203), in reality, they can encompass multiple views and highly contingent ‘assemblages’ (Li 2007). Beyond drawing parallels with the rise and dominance of neoliberal nature (see below, also Brockington et al. 2008) the literature on PPAs does not offer much insight into the methods of appropriation being used, whether this is a form of privatisation or what that might mean on a global scale. It is this gap in the literature on PPAs

that this research hopes to contribute to, bringing in the insights of historical political ecology to complicate the current blending of the worlds of for-profit and community-based conservation to show how and why ownership matters.

### **Integrating with current debates in historical political ecology**

As noted above, the literature on historical political ecology shows how historically specific are certain forms of forestry, conservation and socionatural relations. Put simply “forests today have been produced through politics” (Vandergeest and Peluso 2015: 173). They are the products of ‘situated histories’ (Peluso 2012) and assemblages (Li 2007). This questions any claims to ‘timelessness’ or ‘naturalness’ and requires a careful appraisal of what is being promoted in forestry, by whom and for what stated purpose.

This research seeks to add to this literature – joining the dots between histories and geographies in analysing how the Biocorredor Martin Sagrado REDD+ Project was formed and on what historical precedents and practices it is based. This will help to connect the literature on the political economy of forests with the emerging literature on PPAs, which is still particularly limited in Peru – providing evidence on the changing nature of land ownership for conservation and the emerging actors who are buying it. As noted by Marijnen and Verweijen (2018: 3) “within the field of political ecology, the notions of sovereignty, territory and “the state” are conceptualised in increasingly sophisticated manners, transcending previous monolithic understandings”. This research hopes to contribute to this debate by complicating the role and motivations of the – at times equally monolithic seeming – private sector and how it dovetails with the role of the state.

As noted by Vandergeest and Peluso (2015: 162) “forests exist because people understand or define particular sets of material components on the ground to constitute them”. This research will show that the Huayabamba Valley is being recast in specific ways – as both a ‘forestry power’ to be developed and a fragile ecosystem to be protected – by the assemblage of private actors that have emerged under the banner of the Biocorredor Martin Sagrado REDD+ Project. Furthermore, it will build on the literature on historical political ecology to show the role of carbon (and forest carbon in particular) in driving this very historically specific way of framing forests.

Historical political ecology highlights the absolutely contingent nature of how we approach conservation and how and why current approaches have become hegemonic. In particular, it helps to show how a desire for control over biodiverse landscapes is no modern phenomenon. Critically, however, it shows how discourses of securitisation, modernisation and efficiency have combined and coalesced over the years to reach the modern conservation paradigm – best understood as the rise of neoliberal nature and the pervasive idea of ‘selling nature to save it’ (McAfee 1999).

## Neoliberal Nature

The literature on neoliberal nature – and the associated fields of green neoliberalism (Devine and Baca 2020), Nature™ Inc. (Arsel and Büscher 2012, Büscher et al. 2014) or neoliberal conservation (Holmes and Cavanagh 2016) – explores how nature is being framed and used in a neoliberal world (McCarthy and Prudham 2004, Castree 2008a, Castree 2008b) and how the narratives used to explain climate change have tended to promote neoliberal, market responses (see Liverman 2009). In this sense, neoliberal nature is “an amalgamation of ideology and techniques informed by the premise that natures can only be ‘saved’ through their submission to capital and its subsequent revaluation in capitalist terms” (Büscher et al. 2012: 4).

This relies on a specific framing of neoliberalism, as not just an economic system, but “viewed as a particular ethos of government, [which] emphasizes competition, choice, incentives, performance, accountability, efficiency, audit, and the responsibility and autonomy of individuals and communities” (Li 2010: 234). Indeed, despite its wide-ranging definitions as a philosophy, an ideology or simply an economic system, neoliberalism is often referred to within the political ecology literature via the set of practices that it engenders. Fletcher and Rammelt (2017: 453), for example, refer to neoliberalism as “the political economic regime promoting intertwined processes of privatization, deregulation, decentralization, marketization, and commodification that have become globally hegemonic since the 1980s”. In the realm of climate change mitigation, this is reflected in attempts to frame carbon as a commodity and make it ownable and tradable, alongside wider moves to integrate nature into markets (Bumpus 2011, Carton and Andersson 2017, Carton 2020). This is central to global approaches to climate change mitigation and “widely recognised” as “the major response to climate change” (Paterson and Stripple 2012: 564).

Neoliberal nature has thus helped to show not just the rise in funding from private sources and big business<sup>20</sup>, but the adoption of neoliberal discourses in environmental policy and practice (Brockington 2009, Büscher and Fletcher 2015, Holmes 2011). This includes a range of tools which frame nature in terms of ‘natural capital’ which can be measured, valued and integrated into financial logic and, at times, markets (Fletcher et al. 2018, Sullivan 2018a). This logic has placed the language of capital and financial returns from nature at the heart of conservation – and its advocates in powerful positions. This is a trend perhaps best summed up by the appointment in 2008 of ex-Goldman Sachs banker, Mark Tercek, as CEO of the largest (and richest) environmental NGO in the world, The Nature Conservancy. In his words: “I said goodbye to Wall Street and became an investment banker for nature” (Tercek 2017).

This reading of neoliberal nature highlights the discourses, tools and practices that leverage market-based mechanisms for sustainability goals. Such an approach requires a focus less on simply labelling an approach as ‘neoliberal’ or not, but on identifying aspects of neoliberal thought and practice that permeate environmental policy, often at the project level (Fletcher and Büscher 2017). Various development ethnographies (Watts 2001) have sought to understand these discourses and the flow of “(expert) knowledge, narratives, and ideas” (Büscher 2014: 79) among projects, developers and elites (Mosse 2005, Li 2007). These scholars have explored how projects and practices carry with them certain neoliberal assumptions, which “[strengthen] specific processes of state-market control that consistently foreclose alternative socio-ecological propositions, practices and values” (Dunlap and Sullivan 2019: 7).

This section – and indeed, this thesis – focuses largely on how these discourses spread and ‘foreclose alternative socio-ecological propositions’ in carbon offsetting PES schemes, and in particular REDD+ funding for conservation and reforestation projects. Research from various fields has analysed the commodification of carbon to explore the production process that happens behind the seemingly simple logic of REDD+ and to expose its neoliberal logic, but this section will focus on those from political ecology, with parallel fields to be discussed in the final section of this chapter.

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<sup>20</sup> Despite this increased importance, it is important not to downplay the still significant role of the state. As noted by Christian Parenti (2015: 834), “to deliver nature to production the state must continually measure, describe, categorize, represent, and scientifically render legible and accessible the powers of biophysical reality.”

Literature in political ecology – and neoliberal conservation in particular – broadly follow two approaches. Marxist approaches to critique, using David Harvey’s concept of accumulation by dispossession (which in turn builds on Marx’s theory of primitive accumulation) to analyse the commodification of nature (see for example Glassman 2006, Büscher et al. 2014, Büscher 2016), and/or Foucauldian inspired analyses of biopower (Oels 2005), governmentality (see Winkel 2012) and ‘environmentality’ (Agrawal 2005). This section explores this literature and the insights it has offered for studying carbon offsetting. It begins with Foucauldian analyses which show how the focus on the measurement and efficiency of conservation interventions has led to an anti-political framing of solutions – which present interventions as neutral, technocratic decisions – and then introduces the literature on the commodification process of abstraction, displacement, commensurability and exchange which takes carbon from concept to market<sup>21</sup>.

### **Neoliberal environmentality**

As with so many fields in the social sciences, the work of Michel Foucault has proved enormously popular for environmental researchers (see Winkel 2012 for a summary). While Foucault’s work spans a number of themes and various methods of investigation, his crucial contribution was the problematising of power and exposing the politics of knowledge production.

Genealogical readings of nature have, of course, provided the theoretical framing for historical political ecology (as above) – historicising that which is not considered to have a history in the Foucauldian tradition (see Foucault 1984) – but this section looks at how Foucauldian political ecologists have adapted the concept of governmentality as environmentality (Agrawal 2005) ‘neoliberal environmentality’ (Youatt 2008) and ‘measurementality’ (Turnhout et al. 2014) to explore how this method of governing through measurement and efficiency has framed solutions to environmental problems and influenced conservation practice.

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<sup>21</sup> This will be done here from a theoretical perspective. The practicalities of listing on the voluntary market were discussed in Chapter 1 and will be covered in greater detail from a project perspective in Chapter 4.

### *Measurementality and optimisation*

Oels (2005) suggests that this move towards quantification means a changing role for conservation science – both social and natural – to one of measuring the effectiveness and efficiency of interventions, rather than questioning methods and assumptions (see also Youatt 2008, Turnhout et al. 2014). Put simply, “nature is now conceptualized as a public good whose provision requires clever economic incentives and management to overcome collective action problems” (Oels 2005: 196). Where previously there may have been scope to assess a range of options in any given intervention, now efforts must be made to provide feedback in the form of monitoring, reporting and verification, with the associated army of expert advisers to devise baselines of loss, statistical indicators of progress and measurement schemes (Fletcher 2010, Turnhout et al. 2014).

This is reflected in the increasing importance of quantification and cost-benefit analyses and the pervasive concept of economic maximisation that accompanies financial measures of auditing and performance management. Youatt (2008), for example, highlights how the United Nations Environmental Program’s Global Biodiversity Assessment prioritises a simplistic statistical view of planetary wellbeing, but this view permeates much of the influential thinking of conservation science and can be seen in protected area management policy (Casson et al. 2016) and calls for ‘conservation efficiency’, epitomised in statements such as the below:

“Our objective is to maximise the total number of species (vascular plants and vertebrates combined) conserved across these ecoregions, through strategic investment in a suite of conservation actions, given a fixed annual budget” (Wilson et al. 2007: 1851).

Such discourse has been described as contributing to a ‘techno-managerial’ vision for conservation (Apostolopoulou and Adams 2017) with a general trend towards econometrics and a focus on ‘data-based decisions’ for decision making, applying rational choice theory to human/nature systems to try to maximise impact (Oels 2005), as well as the hugely influential concept of the tragedy of the commons (Hardin 1968). Such an approach leads to a great deal of conservation science practitioners’ output focusing on the creation of baselines and statistical indicators and the associated monitoring, reporting and verification (Youatt 2008, Fletcher 2010, Turnhout et al. 2014). In part, this reluctance to move on from the naturalistic



tradition of observation, notation and finding of laws in conservation science owes a lot to the two chief influences on it – the legacy of ecological science and the current dominance of economics in the field (perhaps the field that has held onto these theories most dearly) – but this powerful positivist discourse in conservation circles has aided in the recasting of neoliberalism from problem to solution in climate change.

This epistemological position both helps to explain and in part is explained by neoliberalism's focus on measurement, management and efficiency. This is particularly salient at the agricultural and environmental frontiers where efficient land management is seen not just as a way to expand capital, but to spread development (Li 2007). While a signal feature of neoliberalism, this tendency to search for efficiency in the land has been traced back to the roots of capitalism. Wood's (2017) study of the enclosures in late medieval England (building on Marx's concept of primitive accumulation, see above) shows how concepts of 'improving' the land – and the creation of areas of 'waste' – were used to justify the widespread dispossession and proletarianisation of the peasantry. There is, however, reason to believe that these processes have been advanced, accelerated and adapted by neoliberalism, with an increasing focus on measures of effectiveness and efficiency in place of more direct methods of disciplining and governing (Turnhout et al. 2014).

The focus on quantification has numerous implications for conservation practice, not least how it leads to people viewing the natural world in specific ways, with practitioners able to advance specific ideals of conservation at the cost of other nature/society formations (Sullivan 2009). Osborne (2015) has shown, for example, how carbon forestry leads farmers to view trees, forests and land in line with their framings for monitoring and verification. This is a theme that will be returned to throughout the research (and in section three of this chapter, below), but the degree of objectivity afforded by this epistemological approach also positions supranational groups and NGOs in a position to define problems, solutions and exactly the type of information that is considered valid or 'scientific' (Turnhout et al. 2014).

### *Anti-politics*

The unequal power to define the nature of interventions has led to a 'depoliticisation' of solutions to climate change and deforestation. In the field of development, this depoliticisation has been described as 'anti-politics', as the overtly political nature of

intervention is removed to facilitate a non-antagonistic approach (Ferguson 1990) and post-politics, which is: “marked by the predominance of a managerial logic in all aspects of life, the reduction of the political to administration where decision-making is increasingly considered to be a question of expert knowledge and not of political position” (Swyngedouw 2010: 225). This connects the political ecology literature with the broader post-colonial and development literature which aims to uncover the ontology, epistemology and axiology of neoliberalism and how “[n]o matter how qualified, globalization in these discourses always amounts to a deepening and a universalization of capitalist modernity” (Escobar 2012: xxxii). This literature also highlights how the universalising and technocratic nature of globalisation and capitalism has been accelerating under neoliberalism.

Anti-political processes thus require a radical simplification to subject conservation and development projects to the logic of the market – and the idea of ‘*homo economicus*’, a rational actor altering behaviours to maximise cost-benefit. In the case of ‘natural capital’, this logic “rests on the assumption that if natural resources can be valued financially, a critical mass of people – from global policymakers to local resource users – will be motivated to defend them” (Fletcher et al. 2018: 1-2). In this reading of human motivation it is enough “to incentivize ‘stakeholders’ to favour conservation over resource extraction” (*ibid.* 2), to deliver on project goals. As noted by Agrawal and colleagues (2015), this assumption – that financial incentives are the best way to drive environmentally-friendly behaviour – is so commonplace as to go unrecognised by most of its proponents.

This has resulted in a similarly narrow view of development, offering people projects and stipends and ignoring the wider ‘politics of transformation’ (Pelling 2011), and leading to a tendency to view complex issues as simple problems that can be solved with step-by-step unilateral solutions (Igoe and Brockington 2007)). On a global scale this is proving self-reinforcing, granting environmental groups enormous power, with debates in major fora focused on the same policy prescriptions, and how to do the same thing better, rather than questioning the efficacy of the method (Holmes 2011).

REDD+ is emblematic of this approach, in that “it proposes a single, simplified policy mechanism: performance-based incentives for forest carbon” (Clements 2010: 310). Much of the language from the wealth of REDD+ backers reiterates that the scheme carries a ‘simple’ message; that “forests are worth more standing than cut” (Viana 2009: 1). This

“ambiguous and malleable nature challenges those seeking to contest it, while allowing a wide range of actors to rally around its multiple-win promises” (Asiyanbi and Lund 2020: 11). On a global scale this is self-reinforcing as “leaders provide accounts of the world that are implicit in our understanding of ‘the situation’”(Grint 2005: 1490). Thus, carbon becomes not simply a proxy measure to generate funding for conservation, but central to climate change politics. As noted by Lohmann (2012: 91), it reduced the complex web of relations which drive climate change to “a better climate = reductions in CO2 emissions”.

This raises serious questions about the triple win that REDD+ promises of development, carbon offsetting and biodiversity conservation, and the relationship between the extrinsic motivations offered by REDD+ schemes and how they work with – or, indeed, crowd out (Agrawal et al. 2015) – intrinsic motivations. More broadly the increasing tendency to view environmental ills as technocratic problems which can be measured and managed, has also led to solutions which place a value on nature – and favour those able to capture it.

### **Commodification of nature**

Amongst the broader literature on neoliberal nature has been a stream of work that has built on David Harvey’s (2003) concept of accumulation by dispossession – in turn, based on Marx’s concept of primitive accumulation – to show the effects of the deepening commodification of nature. This works through six stages of commodification – privatisation, alienability, individuation, abstraction, valuation and displacement (see Fletcher and Büscher 2017) – to create the conditions for capital expansion into new geographies and ecologies.

These processes refer to the creation and capture of new property rights and the extension of new markets into hitherto non-commodified spaces. The study of accumulation in this sense has a long history, often traced back to Marx’s concept of ‘primitive accumulation’ and the “historical process of divorcing the producer from the means of production” (Marx 1990: 874). Largely based on observations of relations in rural Britain, the process is understood as “taking land (...) enclosing it, and expelling a resident population to create a landless proletariat, and then releasing the land into the privatized mainstream of capital accumulation” (Harvey 2003:149).

This idea and analytical tool was revived by Harvey (2003) for the neoliberal era as accumulation by dispossession. Accumulation by dispossession leads to the “conversion of common rights of usage into private property rights in land”, where, “land itself becomes a commodity” (Harvey 2010: 244). This also, however, broadens the original concept to refer to the establishment of private property rights “to assets that were previously not inserted within social relations of ownership and non-ownership” (Andreucci et al. 2017: 4). Thus, “accumulation by dispossession ultimately comes down to the question of creating and (re)assigning of property rights” (*ibid*: 6) and, as noted in Chapter 1, carbon markets *necessitate* a privatisation of the rights to carbon and as such open up the possibility of their capture by external groups.

Accumulation by dispossession has been effectively used by a number of political ecology scholars to analyse the nature of dispossession for projects concerned with conservation and ‘sustainable development’ (Kelly 2011, Büscher et al. 2012, Neves and Igoe 2012, Bocarejo and Ojeda 2016) and has been expanded upon to encompass new methods of accumulation, such as ‘accumulation by conservation’ (Büscher, and Fletcher 2015), ‘accumulation by alienation’ (Dunlap and Sullivan 2019), ‘accumulation by decarbonization’ (Bumpus and Liverman 2008), ‘green grabbing’ (Fairhead et al. 2012) and ‘value grabbing’ (Andreucci et al. 2017). Each of these approaches, while distinct, aims to analyse the processes of dispossession and elite resource capture that are emerging and extending the reach of capitalism through the natural world.

This capture requires a very specific view of complex ecosystems which allows for the abstraction of different elements, such as carbon, from their interdependencies and a way of “treating the environment as consisting of discrete units which are thus rendered quantifiable and measurable” (Turnhout et al. 2014: 583). As Kelly Kay (2016) has shown within conservation easements in the US (a popular form of adoption, favoured by The Nature Conservancy), the abstraction and individuation of nature allows for value to be accrued not just from wider ecosystems, but from all elements within them. Here then, carbon, water, pollination and even clean air can be quantified and valued, independently of the environment they are in.

This approach requires a simplification of the ecosystemic flows, particularly of carbon as it needs to be treated as commensurable in its retention or emission across its diverse

environments. As noted by Turnhout and colleagues (2014: 582) “Before a commodity or service such as carbon storage can be exchanged, it must be calculated and made transparent: it must be known, counted, expressed in standardized units, and, ultimately, made commensurable with monetary value”. That is, to make the complex web of interacting and interconnected parts of an ecosystem ‘market-friendly’, they must be “sliceable, diceable, sellable, buyable” (Lohmann 2010: 229). With regards to forests this implies a great simplification to specific functions that can be monitored, and ideally controlled, as shown by various scholars in carbon forestry projects (Leach and Scoones 2015, Osborne 2015, Richards and Lyons 2016, Carton and Andersson 2017, Nel 2017). Richards and Lyons (2016: 211), for example, show how landscapes must be ‘hemmed in’ in carbon projects “so as to minimise leakage and ensure permanence”.

For offset schemes to function, these elements need to be made commensurable across ecosystems, environments and nations. In short, a tonne of carbon sequestered in a forest in Peru, needs to equate with one emitted by a plane flying from Paris to Lima. Apostolopoulou and Adams (2015: 26) go as far as to refer to this as the “defining characteristic of offsetting” as carbon trading “reframes conservation action as an exchange of ecological credits, where numerical scores that are considered equivalent in both ecological and monetary terms represent nature lost, saved or recreated”. This commensurability was ratified with the creation of offset mechanisms as, “Articles 3 and 12 of the Kyoto Protocol stipulate, without argument, that these offset credits are identical with emissions reductions, thus legislating into existence an abstract, non-situated, omnibus category of reductions/offsets” (Lohmann 2010: 238).

As noted in Chapter 1, this relies on the calculation of tonnes of carbon dioxide equivalent – tCO<sub>2</sub>e – which provides a universal measure for carbon (amongst other gases) emitted avoided or stored (MacKenzie 2009, Lohmann 2010, Paterson and Strippel 2012). In this sense, it can be considered a form of ‘*abstract carbon*’ (Lohmann 2010) – as with abstract labour, which obscures its real content in favour of exchangeability (Marx 1990). It is through the sums and figures of tCO<sub>2</sub>e (and the concept of additionality, see Chapter 1 and 4) that, for example, The Nature Conservancy is able to claim that reforestation is the most cost-effective way to mitigate carbon emissions, followed by avoided forest conversion, therefore making it more cost-effective to replant forests than not to chop them down. Equally, through this offset logic, The Nature Conservancy can claim that natural climate

solutions could provide emissions *equivalent* to taking ‘millions of cars off the road’ (TNC 2017).

Beyond the calculations of additionality, these combined processes of abstraction – breaking ecosystems down into legible and quantifiable elements – and commensurability – making these elements equal across the planet through tCO<sub>2</sub>e – allow carbon as a commodity to be valued and entered into markets. It is within this context of an increasingly legible, individuated and valuable nature that we have seen a growth in efforts to capture it. And, alongside a growing trend of the appropriation of vast tracts of land in other countries, land grabbing (White et al. 2012), a new range of actors have emerged that seek to claim the rights to land for ‘green’ reasons.

These ‘green grabs’ have been defined as “the appropriation of land and resources for environmental ends” (Fairhead et al. 2012: 237). The term, originally used in a newspaper article by John Vidal (2008), has been elaborated on in the political ecology literature (see in particular, Fairhead et al. 2012), with examples provided from REDD+ projects (McCarthy et al. 2012) and other PES schemes (Fletcher and Büscher 2017), ‘biochar’ production (Leach et al. 2012) and ecotourism (Ojeda 2012). Here appropriation is both in terms of actual ownership as well as assuming control over the behaviour and ways of thinking of those in areas of environmental importance (see Kelly 2011). In putting nature to work for green ends, through whatever arrangement lands are acquired or managed, there will always be a “restructuring of rules and authority over the access, use and management of resources, in related labour relations, and in human-ecological relationships, that may have profoundly alienating effects” (Fairhead et al. 2012: 239).

The new trends of appropriating and/or using lands for sustainable ends means that ‘notions of “green” (and what, and who, is green or not) come to be defined and mobilised in particular ways’ (*ibid.* 239). As noted above, this often relies on a narrative of ‘improving’ local practices and applying rational management techniques to unlock value. What may have been forest can become viewed as an unprofitable area to the global community and ‘becomes a valuable asset which not only can be, but must be, sold.’ (*ibid.* 245).

This raises questions of unequal environmental justice inherent to any offsetting systems (Carton 2020), as the logic of offsetting firmly lays the need for change in faraway places

assuring that excesses in one area can be offset by green actions elsewhere ‘with one nature subordinated to the other’ (Fairhead et al. 2012: 242). It also has implications for the transfer of land and assets from local hands to more powerful global actors. As noted of land deals more broadly, “[g]iven the North/South power asymmetries that also mirror the direction of flow of transnational land investments, such transactions enable the shift in rights; from the hands of peasant and subsistence farmers to corporate actors, or from the less powerful to the powerful” (Richards and Lyons 2016: 209).

As detailed in this section, a range of scholars have tracked these privatisations and the local impacts felt, a smaller number, however, have attempted to formulate this to understand both the method of production and the dynamics of exchange within actually existing carbon markets and commodity chains and how they integrate into local landscapes and socionatural relations (although see Nel 2017, Andreucci et al. 2017, Carton 2020, Palmer 2020). This is a gap in the literature that this research contributes to, providing a clearer view of who is doing the grabbing, how and why, and what impacts are felt.

### **Are PPAs neoliberal or not? Moving beyond neoliberalism**

The literature on neoliberal nature exposes the assumptions and practices behind currently hegemonic approaches to conservation and how these have spread across the world in specific forms. This has allowed scholars to highlight the practical requirements of markets and the fictitious nature of carbon as a commodity – and who this impacts and how. It has shown how a focus on privatisation and individual ownership, entrepreneurialism and extrinsic motives has come from a prevailing political economic ideology, despite its claim to neutral scientific objectivity. These discourses reflect, as noted by Escobar (2012: xxxii) of development projects in general, “a view of the world as seen by those who rule it—a world from above” and by Moore (2011: 7n6) “capital’s utopian project to remake the world in its own image – a world of interchangeable parts”.

At this level, the two main streams of analysis explored above both seek to deepen this understanding of neoliberal nature. One focuses on Foucauldian analyses of governmentality and how the techniques of government are applied to condition local communities to meet the demands of global markets and knowledge regimes. The other takes a more Marxist position to analyse how the commodification of carbon is increasingly weaving the natural

world into global markets. Both of these approaches are connected and have their obvious merits, but raise issues for the project to be analysed here.

While PPAs may suggest a classic case of neoliberal biopower – the purchasing of the rights to dictate how land is treated and put bodies to specific tasks – when applied to the real world of negotiation and negation that projects entail, this seems to miss the messy dialectic of power and agency at the local level, not to mention positioning Pur Projet as an external agent looking to impose their will on faraway communities. Thus, this approach can tell us a lot about *domination* but less about *exploitation* (Boltanski and Chiapello 2018). While PPAs may exhibit certain neoliberal traits, projects often position themselves as *opposed* to current unjust economic systems. In this research, a similar dynamic will be shown, with many leaders within the project actively disavowing neoliberalism.

Equally, from the Marxist perspective, while for-profit conservation and the ‘adoption’ of land may seem a clear case of accumulation by dispossession, this research will look to complicate and expand the concept to analyse the role of new economic forms and the type of dispossession – and exploitation – they lead to. As will be noted, the Biocorredor Martin Sagrado REDD+ Project neither dispossesses communities of their land, nor their labour, as they continue to be supported as small-scale producers, albeit increasingly linked into global commodity flows.

More broadly, despite many case studies, “REDD+ has not (yet) resulted in the expected “green grab” in the conventional sense” (Lund et al. 2017: 125) and even the keenest REDD+ advocates admit that “a global carbon market has not materialized and is unlikely to emerge” (Angelsen et al. 2017: 718). This is not to claim that no dispossession takes place, but that a slightly different frame is needed to understand the dynamics at play, one that encompasses new conceptual tools to investigate the creation and direct sale of carbon to companies and consumers.

As will be discussed below, while it has been noted that the process of selling carbon on the carbon market involves a process of emphasising benefits (Asiyanbi and Lund 2020) and selling stories of success (Büscher 2014), little of the theoretical rigour applied to wider REDD+ structures have been applied to the voluntary market and the marketing and projections of *sustainable development* that drives it. Within this framing, people’s desires are



wrapped into bigger projects of climate change, poverty alleviation and commodity markets – and the emphasis is on REDD+ project developers to market these goals together. As noted by Dunlap and Sullivan (2019: 13): “[a] powerful trio of material deprivation, marketed developmental desires and ‘saving nature’ is enrolled into one package to advance ‘green capitalism’, amidst an instrumentalized reality of poverty and extreme inequality”. This research seeks to expand on how this ‘powerful trio’ is combined and marketed through the specific example of carbon credits.

To attend to this gap in the literature, this research will approach the market in terms of how it adds value to carbon through a process of ‘enrichment’ (following, Boltanski and Esquerre 2016) and how value “is tied to, and surplus is generated from, locational advantage, intellectual property, and related forms of monopoly rent” (Fraser 2017: 60, see also Harvey 1982). This will highlight the unequal flows of capital and knowledge at the heart of carbon projects and the exploitation inherent to conservation projects which rely on the marketisation of ‘developmental desires’. This approach requires “reorienting nature–society scholarship away from a preoccupation with neoliberal natures and toward the more general role natures play in producing value and enabling expanded capital accumulation” (Johnson 2017: 319). To do this, the next section of this chapter brings neoliberal nature into conversation with literature on ideologies, infrastructures and the production of nature to analyse the dreams, drives and desires behind utopian visions for the future of the forests.

## **Ideology and the Production of Nature**

Conservation schemes and reforestation projects rely on specific conceptions, or prefigurations, of the future. Indeed, part of the logic of green economy schemes rests on the idea that business-as-usual isn’t sustainable and that things *must* change. This means that different actors (companies, consumers, developers) mobilise dreams and desires of the future and the people and landscapes that will produce it.

Understanding these dreams and desires means “pulling out the shapes and tendencies of powerful, future-oriented world-making projects that reorient states, citizens, and environments in subtle and profound ways” (Hetherington and Campbell 2014: 194). This has received comparatively less attention in the political ecology literature than the concrete processes of dispossession and domination. As noted above, political ecology is focused to

a large degree on Foucauldian analyses of governmentality and biopolitics, or Marxian structural analyses of accumulation by dispossession. While there are some notable exceptions to this (see particularly Sullivan 2013b, 2018b, Igoe 2013, Malm 2018a, Carton 2020, Büscher 2021) – this section also relies on scholars from adjacent fields such as world-ecology, critical geography and cultural studies, to bring new insights and perspectives to the debate.

As detailed in the introduction to this thesis, this research will be paying specific attention to how companies are trying to reconcile the worlds of economy and ecology in response to climate change, specifically through carbon offsetting. Read differently, this is a question of how companies are integrating critiques of capitalism into new for-profit business models. Indeed, global conservation initiatives are increasingly focused on linking using carbon as a measure to integrate it into solutions to climate change – particularly through nature-based solutions: “a concept introduced specifically to promote nature as a means for providing solutions to climate mitigation and adaptation challenges” (Nesshöver et al. 2017: 1216).

Analysing this trend requires a reframing of nature’s relationship with capital. Thus, where the literature on neoliberal nature has helped to uncover the machinations of capital *on* nature, literature from world-ecology and ideology instead seek to analyse global flows of capital and how they work *through* socionatural relations. That is, how “the accumulation of capital, the pursuit of power and the co-production of nature form an organic and evolving whole” (Moore 2017: 179).

Such an approach can help to move beyond an understanding of current approaches as neoliberal, to analyse how these combined processes of production are changing in response to the critiques and crises of capitalism. It does so to provide a window into how these crises are mobilised and what responses they engender or foreclose. In this it follows Ekers and Prudham’s (2015: 2442) claim that “understanding how articulations of political-economic and ecological crises comprise the terrain on which future accumulation (and accumulation is always a bet about the future) is crucial for exploring the political and ecological conditions of possibility for various movements”.

These are questions of ideology and how specific relations evolve over time and become reinforcing or hegemonic. Analysing them can help to uncover “not just why capitalism

drives planetary crisis, but how its contradictions compel it to continue down this deadly and self-defeating path” (Moore 2017: 179). This section will detail some of the literature which has begun to uncover these contradictions, exploring the “somewhat unruly set of intellectual alliances” which is “attempt[ing] to understand the ideological dimensions and significance of fixed capital, infrastructure, and landscapes” (Ekers and Prudham 2018: 19). It will begin by explaining how a deeper understanding of ideology can reveal how dreams and desires become embodied in landscapes and infrastructure, before introducing the emerging disciplinary field surrounding the production of nature. This combination of literature will form the basis of critique that will be used to explain the trend towards seeing the natural world as a form of infrastructure and what this might mean for carbon offsetting projects.

### **Ideology, dreams and desires**

Literature in various fields of architecture, cultural theory and anthropology have shown how human history is littered with attempts to create planned communities, utopian architectural projects and optimally designed new cities (Murphy 2015), but the history of conservation is also marked by attempts to recreate idylls and ideas of ‘perfect’ and ‘pristine’ nature or tied into projections of ‘gentlemanly pursuits’ (Neumann 1998). Model villages, representing ideal approaches remain influential to proving conservation success and grand schemes to shape the natural world to reflect specific ideologies and ideas of humanity are numerous (Wilson and Bayón 2018, Asiyambi and Massarella 2020, see also Wilson 2016), not least Henry Ford’s quixotic scheme to build a suburban American dream in the Brazilian Amazon as detailed in Grandin’s (2009) *Fordlandia*.

In more recent times, this has been noted in the increasingly interwoven worlds of digital media and conservation desires, Nature 2.0. Here, conservation narratives are infused with wider ideals of the natural world, “they help to reimagine ideas, ideals and experiences of (‘pristine’) nature” (Büscher 2016: 3). Analysis of the necessity of ‘spectacle’ to conservation NGOs has been detailed at length by theorists who have shown how it can serve to obscure and alienate, with complex cultures and landscapes recast as wild and dangerous or fragile and in need of help (Igoe 2010, Igoe et al. 2010, Büscher et al. 2012). The need for charities to be dynamic, constantly evolving with new approaches and seeking new ways to engage potential donors (De vries 2007), has increased both the use of spectacular presentations and their ubiquity in different media channels, particularly interactive ones (Büscher 2016). These

simplify landscapes and the process by which consumers can help protect them. As summed up by Igoe and colleagues (2010: 498-99) “they present an audience of potential supporters with compelling virtual opportunities (problems that need to be solved) and the resources necessary to realize these opportunities (landscapes and animals in need of protection) if they will only make the necessary investment”.

These streams of analysis regularly refer to the idea of ideology, but a clear definition or reason for its importance is rarely offered in the political ecology literature. This is a notable absence, as the return to ideology in critical theory (Žižek 1989, Žižek 1994), sociology (Boltanski and Chiapello 2018) and even economics (Piketty 2020), is based on a more nuanced understanding of how it functions and is reflected in our interpretation of the world. As noted by Boltanski and Chiapello (2018: 10):

“In this instance, we may indeed speak of a dominant ideology, so long as we stop regarding it as a mere subterfuge by the dominant to ensure the consent of the dominated, and acknowledge that a majority of those involved – the strong as well as the weak – rely on these schemas in order to represent to themselves the operation, benefits and constraints of the order in which they find themselves immersed.”

This, then, requires new tools to analyse how ideology manifests itself, not just a study of how power is exercised or uncovering a false consciousness, but analysing the gap between rhetoric and reality. In their study of the development (or not) of a trans-Amazonian waterway, for example, Wilson and Bayón (2017b: 11) show these schemes are not “a smokescreen for a conspiratorial agenda, but rather illustrate the extent to which capitalist desires are ultimately subordinated to the accumulative drive of capital itself”. The role of fantasy in this sense is critical as it functions not just as false imagery (as one might expect from the term), but as understood in Lacanian theory, as a critical construction to conceal the antagonisms, incoherencies and inconsistencies of ‘the Real’ – understood in turn, as the “repressed drives against which ‘reality’ is symbolically constituted” (Wilson and Bayón 2017a: 3).

While the Lacanian theoretical language may seem unhelpful, or even obtuse, here it provides a framework for analysing dreams, desires and fantasies in relation to concrete outcomes. The study of how these dreams manifest themselves in projects has been elaborated as ‘fantastical materialism’ by Wilson and Bayón (2017b) analysing “the ways in which utopian visions are distorted, inverted, and destroyed in the process of their realization” (Wilson and

Bayón 2017a: 56). This is all the more important when considering the grandiose claims made by proponents of natural climate solutions, REDD+ and for-profit conservation. Indeed, the hegemonic position of PES in policy debates has led to increasingly bold claims to its potential for protecting biodiversity and creating new valuable markets, as can be seen in plans for the ‘Amazon Third Way entrepreneurial revolution’ based on:

“aggressively researching, developing, and scaling up a new high-tech innovation approach that sees the Amazon as a global public good of biological and biomimetic assets that can enable the creation of innovative high-value products, services, and platforms for current and for entirely new markets.” (Nobre et al. 2016: 10764)

Investors make similarly bombastic claims regarding trees and forests as the ‘best’ solution to climate change or the ‘best’ vehicle for investment. This often involves discourse of ‘unlocking their potential’ through blockchain technology or the kind of vast tree-planting targets exemplified by the One Trillion Tree campaign. How can we understand, for example, the framing of forests by a senior associate director of The Rockefeller Foundation (Bernasconi 2017):

“No technology is as effective at storing carbon as tropical forests, and saving and restoring them offers one of the cheapest large-scale forms of emissions abatement or capture, while providing a host of other environmental and social benefits. To take advantage of this crucial hedge against a warming planet, more trees must remain standing. For those of us who believe that a forest credit market could provide critical means of protecting our planet our Musk<sup>22</sup> moment is here. We must be similarly bold.”

While these claims may be made to spark excitement and interest and not reflect the more pragmatic views of project managers, they have real-world impacts. Taking these dreams seriously in how they are mobilised by different actors within a project and manifest in the landscape is both an emerging area of academic interest and a core axis on which this research proceeds. In the valleys of Peru on which this research focuses, how interventions are framed and how nature is ‘put to work’ – in the language of world-ecology – reflects wider ideology and presuppositions of useful or desirable nature.

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<sup>22</sup> Referring to Elon Musk, the Silicon Valley entrepreneur renowned for extravagant claims and grand plans known as ‘moonshots’.

One such framing of the natural world that this research will focus on is nature as a form of ‘green infrastructure’ – as a stable, manageable and replicable system on which to base human development. Green infrastructure as a discourse has risen alongside that of natural capital and “has gained prominence as a way to talk about the services provided by natural systems and to convey the need to manage and maintain these systems like other types of infrastructure – roads, electrical lines, water distribution systems” (Benton-Short et al. 2019: 331).

Thus far, green infrastructure has mainly been explored in the urban context (Chatzimentor et al. 2020), as “an intentionally designed, multifunctional technology that directly uses or mimics the ecological processes of soils and plants (e.g., green rooftops, rain gardens, and bioswales)” (Finewood et al. 2019: 909), but is beginning to be used in its inverse, trying to make the natural world reflect infrastructure. This has at times been an explicit call from conservation leaders, as in Mark Tercek’s (2017) claim while at The Nature Conservancy that “[i]t seemed to me that investing in nature—or “green infrastructure”—might be the key to unlocking a powerful new source of capital for our mission”. In other cases it can be inferred, as noted by the Executive Secretary of the Convention on Biological Diversity that, “biodiversity is the “infrastructure” that keeps our planet going” (in Hance 2018). This has “led to more explicit calls for the “gardening” of ecosystems and for a more hands-on and interventionist type of conservation that measures success in terms of sustaining ecosystem function and biodiversity while at the same time better serving human needs” (Preston 2017: S41, see also the analysis of ‘new conservation’ in Büscher and Fletcher 2020). As noted by Benton-Short and colleagues (2017: 346), “[w]ith its “rebranding” as green infrastructure, vegetation has newly found a new and central role in sustainability efforts, given its potential to address all three pillars of sustainability: environment, economy, and equity”.

The ideological language and framing of infrastructure connects the work on conservation with an emerging literature on the ethnography of infrastructure (Star 1999, Dourish and Bell 2007, Venkatesan et al. 2018). As noted in her seminal introduction to the concept, Star (1999: 380) states that: “[p]eople commonly envision infrastructure as a system of substrates—railroad lines, pipes and plumbing, electrical power plants and wires. It is by definition invisible, part of the background for other kinds of work. It is ready-to-hand”. This makes it inherently interesting for ethnographic exploration and can be extended to socionatural frontiers which “are themselves changing. It is no longer merely the state’s role to impose

itself on the landscape, erasing the natural, but rather to marshal the productive forces of nature and of the unruly people who live in its midst (Hetherington and Campbell 2014: 193)’’.

This literature highlights some of the ways understandings of fantasies and utopian visions can be integrated into the study of infrastructure and how “the logic of such infrastructures is permeated with its own dreams and desires, which become ensnared in complex and counterintuitive materializations” (Wilson and Bayón 2017b: 3). This means taking a critical look at how (green) infrastructure is produced to serve certain purposes, or how “competing narratives contribute to the inextricable entanglement of fantasy and reality through which the spaces of capital are produced, and the accumulation of capital is achieved” (Wilson and Bayón 2017b: 12). This requires an understanding of how nature and space are ‘produced’.

### **From the domination to the production of nature**

An emerging literature on the production of space and the production of nature analyses how specific socionatural formations are created in the service of capital accumulation. At the core of this insight is a focus on the ontological separation between society (as something experienced here) and nature (to be protected or exploited there). Moore (2015) has referred to this as a form of ‘Cartesian divide’, based on Descartes’ separation of body and mind, in which a false dichotomy is created in our very view of nature as a provider of services to be managed, rather than inscribed in societal relations themselves. As noted by Carolyn Merchant (1982: 143-4):

“Nature-culture dualism is a key factor in Western civilization’s advance at the expense of nature. As the unifying bonds of the older hierarchical cosmos were severed, European culture increasingly set itself above and apart from all that was symbolized by nature. Similarly, in America the nature-culture dichotomy was basic to the tension between civilization and the frontier in the westward expansion and helped to justify the continuing exploitation of nature’s resources.”

Alongside Descartes’ mind/body dualism this specific view of the natural world is often traced back to the enlightenment and injunctions to master and dominate nature, such as Francis Bacon’s call that “now we govern nature in opinions, but we are thrall unto her in necessity: but if we would be led by her in invention, we should command her by action” (cited in Adorno and Horkheimer 1997: 4). Such a mastery, or domination, of nature

obscures other possibilities of convivial living which, as explored extensively by the scholars of the Frankfurt School (Adorno and Horkheimer 1997, see also Jeffries 2017), could ultimately condemn humans to a restrictive view of progress, as we become “mastered by our own creation” (Flodin 2018: 183).

This has been taken further by eco-feminist scholars, adding more depth to the idea of a Nature/Society dualism by highlighting the longer history of the idea<sup>23</sup> and specifically the role of gender in this framing of nature as machine-like, rational ecosystems to be managed (Merchant 1982, Plumwood 1993). In this view, “reconceptualizing reality as a machine rather than a living organism, sanctioned the domination of both nature and women” (Merchant 1982: xvii, see also Plumwood 1993). The work of Silvia Federici (2004) has been particularly influential in this field, tracing how conceptions of what was natural and unnatural were used to subjugate women and privatise resources. Using the example of the struggle over social relations and reproductive rights in 16th and 17th century Europe and America, and specifically the witch-hunts, Federici (2004) shows how the separation of unruly nature in all its forms from a supposed civilised society underpinned the structuring of early capitalist societies, allowing for the very basis of the enclosures (see above).

This literature adds nuance to the dialectic relationship between nature and society – one which encompasses various forms of domination. As noted by Merchant (1982: 42), this requires “a special sensitivity to the dialectical relationship between human behavior and institutions on the one hand, and the natural environment, on the other”. Rather than a simplified monistic collapsing of the categories of nature and culture<sup>24</sup>, “[i]f nature and women, Indians and blacks are to be liberated from the strictures of this ideology, a radical critique of the very categories of *nature* and *culture*, as organizing concepts in all disciplines, must be undertaken” (Merchant 1982: 144).

Various research has built upon this body of work trying to understand the dialectical relationship between nature and culture, with attention paid to not just the monolithic separation of the categories, but how and why distinctions are drawn in specific ways. That is, what is deemed to be controlled and what is reified as beyond it. This has been expanded upon as the production of nature by Neil Smith (1990: 31):

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<sup>23</sup> Including in the biblical tenets for man to have dominion of the earth (Harvey 1996, Sullivan 2013b).

<sup>24</sup> For a critique of such monism, see Malm (2018a).



“Instead of the domination of nature, therefore, we must consider the much more complex process of the *production of nature*. Where the ‘domination of nature’ argument implies a dismal, one-dimensional, contradiction-free future, the idea of the production of nature implies an historical future that is still to be determined by political events and forces, not technical necessity”.

In introducing the idea of the production of nature, Smith builds on Henri Lefebvre’s work on the ‘production of space’ – a way of analysing the world to assess how we embody dreams in “projects concerned with space” (Lefebvre 1991: 9). The core understanding here is a complex one, “[i]t is not merely that different production processes have different ‘space requirements’; rather, in the process of building productive forces into the environment, space is produced according to the spatial properties of this set of productive forces” (Smith 1990: 86). As noted in the introduction to this section, this can be framed as the way capital “works *through* nature” to produce specific ecosystems that favour the accumulation of capital.

The production of nature has been explored in the specific case of carbon forestry via the ‘real subsumption of nature’ (Ekers 2015, Boyd and Prudham 2017, Carton and Andersson 2017, Palmer 2020) where nature is selected, designed and managed to “work harder, faster and better” (Boyd and Prudham 2017: 877). This work builds on Marx’s concept of the real and formal subsumption of labour to explore the effects of how nature is not just appropriated, but specifically designed to meet productive needs. This adds further nuance to the findings explored above in relation to the prioritisation of certain landscapes and ecosystems in conservation – be they those that reflect conceptions of ‘wild’ nature over their anthropogenic counterparts (Brockington 2009), spectacular presentations of nature to drive advocacy and consumer interest (Igoe et al. 2010) or those that deliver the greatest carbon benefits (Carton and Andersson 2017) – to look at how nature is remade after being constrained and managed.

Researchers in this field have detailed how this solves an additional problem for capitalism at a global level, as new markets provide an outlet for capital to expand (Ekers and Prudham 2017). While the difficulties of such an expansion in conservation projects will be explored in Chapter 4, for reforestation and carbon forestry there is huge ambition for growth (Carton 2019). Plantation forestry, for example, “is estimated to have grown by almost fifty percent between 1990 and 2010, including dramatic growth on the African continent, which is now

described by some as the future hub for plantation forestry” (Richards and Lyons 2016: 209)<sup>25</sup>. In these instances, the incentive is to remake forests to provide greater carbon benefits, to “ensure a pristine carbon-sequestering landscape, thereby enabling investors to maximise capital through the sale of carbon credits” (Richards and Lyons 2016: 211).

This scaling-up of ambition for carbon forestry and conservation and its integration into wider circuits of capital will be explored throughout this research, with attention paid to how “the production of nature mutates from an incidental and fragmented reality to a systemic condition of social existence, from a local oddity to a global ambition” (Smith 2007: 21-2).

### **How do projects reflect ideologies?**

This section has introduced literature and research which crosses over from the field of political ecology into the study of ideology, world-ecology and the production of nature. Exploring how for-profit conservation schemes work as social fantasies – for actors from grassroots activists and community leaders, to policymakers and multi-millionaires – will help to highlight the important role of utopian visions in producing nature. Assessing the underlying ideology behind hegemonic approaches and the self-reinforcing power it holds – rather than it simply being imposed on people by violence – will help to show where contradictions lie in the projects that could condemn them to failure. This will be done by highlighting the “discrepancies between story and disposition – the ways in which power says something different from what it’s doing” (Easterling 2014: 214).

This provides a way to investigate how schemes can operate with so many seeming contradictions visible to all – not least, an approach which proposes making the symptom of deforestation and overuse of resources, capitalism, the cure (as is pointed out in the literature on neoliberal nature). This is also reflected in the focus on specific solutions, where in a Freudian sense: “[a]ttention becomes directed instead towards fetishised solutions that mask, and thereby permit, continuation of the dangerous but satisfying behaviour” (Sullivan 2018b: 15-16). Going beyond a dismissal of projects as disingenuous, but trying to understand why, if neoliberalism and endless profit accumulation is actively denounced, accumulation and

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<sup>25</sup> This dynamic has also been referred to as the socioecological fix (Ekers and Prudham 2015), building on Harvey’s (1982) ‘spatial fix’.

growth still seem to be the end result and other possibilities and avenues of development are closed off.

Understanding this seeming contradiction requires an appreciation of the interplay between competing desires and how they are co-opted or combined to serve wider ideological purposes. As noted by Dunlap and Sullivan (2019: 13), “[t]he manipulation of desires for ecological harmony and climate repair entails marketing prosperity as integral to the developmental dream, of which the ‘green economy’ is a recent expression”. Here, we can begin to understand the allure of these visions and the power they hold for actors involved. Looking at how space is produced in this way and the strategies of ‘putting nature to work’ for the accumulation of capital (Moore 2015), thus, not only allows us to analyse how power and ideology become embodied in the world we live in – as this research will proceed to do – but also to ask questions about the changing nature of capitalism in a warming world (Newell 2015).

The nature of ideology will be traced throughout this research, but with particular attention to how the forest is being recast as infrastructure in Peru and the spaces where gaps and failures in this logic appear. As noted in the literature on the ethnography of infrastructure, infrastructure “becomes visible upon breakdown” (Star 1999: 382) and green infrastructure is no different here where the ‘nature’ that has been solidified as carbon credits, future investment or agriculture becomes most visible due to wildfires burning trees, floods leaching nutrients from soil and diseases ruining harvests. Beyond the obvious negative local impacts, these issues are particularly problematic for carbon markets which rely on the production of a stable nature to offset other deleterious activity and the (spectacular) production of success to sell credits. By drawing these insights and literatures together this research will show how the production of success and the production of nature are inextricably linked in the voluntary carbon markets and, yet, are ultimately contradictory and a significant risk to future success.

## Summary

This chapter has drawn on a broad range of literature from political ecology and beyond. In doing so, it raises questions and debates that will run throughout this thesis and will be revisited and expanded upon in its conclusion, particularly those of ideology, the production

of nature and the numerous binaries that sustain dreams of sustainable development. Not least an ideology which drives the schizophrenic presentation of the Amazon as “either a space to which modernity must be brought or one in which modernity can find antidotes to its own destructive tendencies” (Killick 2018: 32).

Thus, while the empirical content of Chapters 4-7 will present the details of the Biocorredor Martin Sagrado REDD+ project, attention will also be paid to how actors around the project mobilise histories, geographies of responsibility and visions of sustainable futures. While this is something that will be critiqued and questioned over the pages that follow, it is done so not under some grim fatalism – the sort of which the Frankfurt School was often accused of (Jeffries 2017) – but as a way to rethink possible futures. Rather than offering a deterministic one way critique of human domination of socionatures or viewing for-profit conservation as a monolithic imposition of western ideals it analyses how choices are offered or foreclosed, “to think what kind of social power it will take to democratize [the] production of nature” (Smith 2007: 34).

Before moving on to this evidence, the next chapter will explain how the ideas and insights from this chapter will be combined methodologically to investigate the trend of for-profit conservation.

## Chapter Three: Analysing Rhetoric and Reality in Voluntary Markets

This chapter will reintroduce the core research questions of this thesis and detail how the methodology was designed to answer them. This entails translating the insights from the political ecology literature explored in the previous chapter into the precise approach and methods used in the course of this research.

In keeping with the disciplinary tradition of political ecology and following the interdisciplinary nature of the literature review, a methodological pluralism (Doolittle 2015) is inevitable, weaving together a broad range of methods for data collection and analysis. This combines various methods of critique in service of “prising open the capitalist world as we find it, and exposing its imminent tendencies — the waste, inequality and violence, as well as the growth — to critical challenge” (Li 2017: 1248). To: “[fashion] perspectives on the world that displace and estrange it by revealing its cracks and fissures” (Cook 2013: 975).

The research approaches this task in response to its core research questions:

1. How is value created and captured in for-profit conservation and reforestation projects on the voluntary markets?
2. How do the incentives and requirements associated with carbon offsetting on the voluntary markets change how the natural world is perceived by actors involved in the project?
3. Can market-based, for-profit conservation and reforestation schemes deliver on their stated goals and balance local economic and ecological demands?

Each of these questions looks at the gap between rhetoric and reality in the project (following Sullivan 2018b), questioning hegemonic narratives surrounding for-profit conservation. As will be elaborated below, it does so not to deem the project in question a success or a failure, but to expose the underlying ideology to critique and highlight its longer-term implications. This requires describing not only “that which is observable and measurable in the environment, but also [understanding] that which is not observable, namely, less visible social, political or economic structures and processes” (Doolittle 2015: 516).

Such an approach is dialectical in method – holding in tension binary categories, historicised constructions and political economic structures in the historical materialist tradition – but equally requires a focus on the machinations of power and agency on the micro-level, traditionally through the use of ethnographic methods and a focus on a specific case study (or case studies). In combining these two approaches it requires “a process of moving back and forth between the ‘abstract’ and the ‘concrete’” (Ekers and Prudham 2018: 19) and a range of tools and methods to be employed.

Such methodological pluralism, however, still requires a clear explanation of how these methods are used and combined, as well as where the relative strengths and weaknesses lie. This is the focus of this chapter. It begins by offering a summary of the methodological approach taken and the epistemological justification for employing a primarily ethnographic focus. It then moves on to introduce the case study and fieldsite, justifying its selection and providing some historical and ecological context for the analysis that follows. It will then examine the methods for data collection in more detail, before highlighting some of the limitations of this approach and ethical considerations behind the research.

## **Methodology**

Underpinning political ecology’s embrace of multiple fields of study and range of methods and theoretical traditions is an epistemological position which rejects positivist conceptions of the world. As noted by Doolittle (2015: 527):

“In political ecology, the reductionist principles of the scientific method [...] have never been appropriate. Instead, and in order to understand the dynamics of contemporary, complex, multi-scale, interdependent social-ecological systems, a much more holistic approach based on methodological pluralism is needed.”

While this methodological pluralism can allow researchers to approach political ecological questions from a range of disciplines, it also allows for their combination, opening up new possibilities for exploring complex and globally interconnected issues. This is being explored by many scholars dealing with issues of global ecological world-systems (see, for example, Neumann 2004, Moore 2015, Kay 2016, Fletcher and Büscher 2017, see also Sklair 2001 for transnational actors more generally) seeking to show “historical systems of domination that

each organize in a distinct fashion flows of matter, energy, commodities and capitals on a global scale” (Bonneuil and Fressoz 2016: 224).

Investigating these systems and flows of exploitation and utilising a mixed-methods approach to research presents multiple research design issues. Rejecting totalising theories of reality and relying on a ‘toolbox’ of methodological approaches to critically analyse the new webs of relations and discourses produced, carries with it multiple subjective decisions on where, and on what, to focus. In the case of the questions at hand, analysing the political economic environment within which for-profit conservation exists requires both a historically-informed socio-spatial understanding of the changing landscapes and an ethnographic understanding of how local socionatural relations are evolving. This combines questions of place, space and scale with those of livelihoods, culture and self.

Taking such an approach can be seen as blending the traditional roles of anthropologist and historian, as elaborated by Bourriaud (2016: 57) building on Levi-Strauss’s distinction: “There is a difference between the anthropologist and the historian; even though they have the same object of research - social life - the one focuses on ‘conscious expressions’, whereas the other aims to ‘find behind observed practices, the unconscious mechanisms that govern them’”. Within the context of this research, this requires the weaving together of analyses of financial and value flows with discourse and ideology which spreads across various physical and digital sites within which the project operates. This is the meeting point between the systemic analysis and the ethnographic encounter, which allows researchers to understand not just where capital flows, but the “internalization of fundamental underlying guiding forces” via the “detailed inspection of the individual instance” (Harvey 2006: 86-7). This individual instance is the case study.

Thus, alongside understanding the overarching structures and flows, the case study has been the core method of building theory from below across the disciplines of development, political ecology and critical geography, helping to assess the limits to the discourses and technologies of power (Doolittle 2015). While structural and institutional analysis can grant an omnipotent quality to plans designed in the boardrooms and offices of the West, work on the ground rarely shows people simply acting as expected or accepting discourses. As noted by Mosse (2005: 16): “Policy models [...] do not and *cannot* shape actual practice in the way that they claim. They are ignored, resisted, ‘consumed’ or tactically used in ways that

make them irrelevant in the face of more urgent relational demands”. Case studies thus help to expose the relationship between project proponents and recipients and how this evolves over time and across different spaces. Tsing elaborates on this with her concept of ‘friction’ within capitalism and attention to the places where global structures and discourses meet localities and realities:

“Capitalism only spreads as producers, distributors, and consumers strive to universalize categories of capital, money, and commodity fetishism. Such strivings make possible globe-crossing capital and commodity chains. Yet these chains are made up of uneven and awkward links. The cultural specificity of capitalist forms arises from the necessity of bringing capitalist universals into action through worldly encounters.” (Tsing 2005: 4)

Paying attention to these “uneven and awkward links” is all the more important in this case given the globally connected nature of modern conservation and development projects. Indeed, “to study conservation as a dynamic political project from an ethnographic perspective means bringing spatially and temporally distant conferences and meetings within the purview of ‘the field’” (MacDonald 2010: 260). As noted in Chapter 2, private conservation schemes do not happen in a vacuum, but are the result of decades of work on building a consensus on the role of capital in saving the planet. The transnational elite of major leaders from the worlds of business, civil society and politics (including those that transcend the three) that have supported this agenda mostly operate behind closed doors and at conferences (Brockington 2008, Holmes 2011, see also Sklair 2001). Understanding for-profit conservation and the structures that make land deals possible is therefore reliant on understanding the discourses and knowledges that flow (or do not flow) to and from these spaces as much as it is on the sites of the interventions themselves.

A case study approach naturally invites criticism of exceptionalism, not just through the subjective choice of the case, but associated with using a single site to extrapolate up (Flyvbjerg 2006, Tight 2010). While this criticism may well be valid to any researcher seeking to prove a totalising theory, this research instead seeks to point out how these schemes *can* play out and who that might favour to elucidate systemic outcomes. Problematising the singularly positive representations of land adoption – with the so-called ‘triple-win narratives’, of good for the planet, good for people and good for profit (Richards and Lyons 2016) – requires the use of exemplars to question this prevailing orthodoxy. This research, thus, employs multi-sitedness to find “ethnographic fragments” (Tsing 2005, following



Pandey 2000) which “interrupt stories of a unified and successful regime of global self-management” (Tsing 2005: 271), much as Benjamin’s ‘ragpicker of history’ sought to find the fragments left behind from unified stories of success and progress (Jeffries 2017).

This resonates with the emerging work of ‘development ethnographies’ (Watts 2001), where multi-sitedness – albeit in a somewhat different approach from that originally described by George Marcus (1995) – is inherent to the subject of enquiry – namely multi-jurisdictional projects that entail material, discursive and ideological flows. Development ethnographies consider “how practitioners imbue ideas and practices with positive connotations of success and how value is constructed across time and space” (Büscher 2014: 79) which, in the context of this research, is “crucial in order to deepen our understanding of conservation and development within the neoliberal global political economy” (*Ibid.* 79). This requires viewing a multi-sited approach as not simply involving multiple sites, but viewing the fieldwork process in less bounded terms and focused on following threads of the issue at hand (Marcus 1995). This will be done, here, in tracing the chains of actions that link consumers supporting reforestation, through the boardrooms and meetings of conservation leaders, to the forests and plantations in Peru.

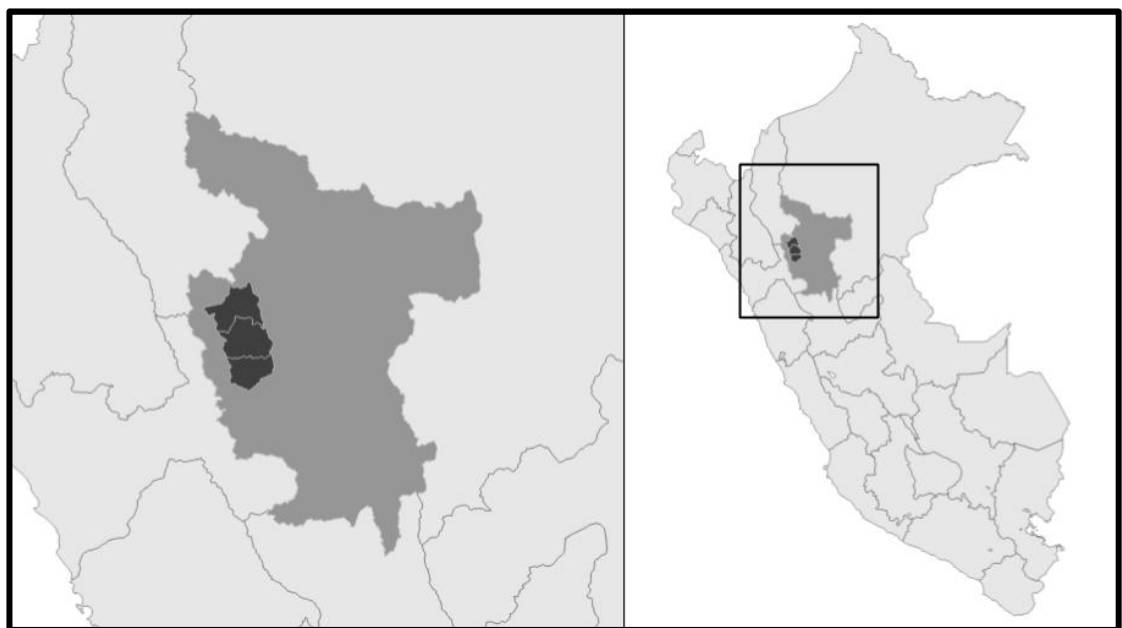
There are various other methodological routes that could have been taken – and PPAs have been usefully explored through legal analysis (e.g. Owley and Rissman 2016), quantitative data alone (e.g. Hora et al. 2018), comparative study (e.g. Carter et al. 2008) and regional or country-based overviews which survey the overlapping of responsibilities, varying success and motives across multiple projects (Holmes 2014, Holmes 2015) – but spending time within an individual project – or ‘programme’ (see Oels 2005) – in this way allows for an analysis of how and why certain discourses travel. This is critical to begin to analyse the ideological implications of these projects. Building on the framework laid out in Chapter 2, the criticism of ideology requires a symptomatic reading and deconstruction of discourse, but also an analysis of how this ideology is distorted and manipulated to function as a fantasy (Žižek 1989). This implies a specific way of observing, ‘listening to’ and interpreting events, which takes the unconscious seriously and, in doing so, can help to analyse to what degree interventions reinforce certain solutions and obscure others.

Pur Projet’s work in the Huayabamba Valley represents a fascinating and complex case of for-profit conservation within which to take this approach. Far from being a cynical land

grab or profit maximisation vehicle, the individuals involved rarely seem driven by the type of evangelical desire to free up capital for markets as much as by the idea of changing the way capitalism functions. Moreover, the benefits the project is delivering on the ground and the international plaudits it has received highlight the no small degree of success of the model. This makes an investigation into the “ethnographic fragments” which interrupt this story of success both nuanced and novel and better able to resolve questions concerning the dreams and desires introduced in the last chapter. The next section of this chapter introduces this case study in more detail before outlining the methods used for investigating it.

## Case Study: The Huayabamba Valley

The Huayabamba Valley, predominantly situated in the San Martín region of Peru but stretching into the Amazonas and La Libertad regions (see Figure 3.1), provides the basis for the case study in this research. It was selected following a data-led process, although as noted by Flyvbjerg (2006), based too on the researcher’s intuition and multiple subjective choices. An initial global dataset was assembled to ascertain the countries with the greatest number of PPAs, before a more detailed shortlist of protected areas in Peru was made and split by region to highlight where activity was greatest. This was followed by an analysis of policy and NGO documents from shortlisted sites and then a pre-fieldwork trip to assess the suitability, safety and activity of a number of sites, predominantly in San Martín.



**Figure 3.1** Map of the Biocorredor Martín Sagrado REDD+ Project within the context of Peru

As a result of this process, San Martín was selected thanks to its high number of private conservation initiatives, but also the presence of the Biocorredor Martín Sagrado REDD+ Project, which represents a unique coming together of ideas and actors and an opportunity to study the differing dynamics of conservation and reforestation projects in the same site. Furthermore, despite the project's international accolades the project was established explicitly to benefit local groups, rather than as an investment. Profit *maximisation* is explicitly not the goal of the project developer, Pur Projet. Put simply by one employee: “The end goal here is not to make money, or profit. We all want to induce change within the private sector”. In this regard the Huayabamba Valley and the Biocorredor Martín Sagrado REDD+ Project were chosen as a best practice example, offering an opportunity to analyse a project that is aiming to subvert existing models of neoliberal commodity production through specific productions of nature, in this case agroforestry and timber plantations.

This section explores the reasons for selecting this case study in more detail, through, firstly, the history of the Huayabamba Valley, secondly, an explanation of its ecology, thirdly, an overview of the wider legal context surrounding carbon and protected areas in Peru, fourthly, an introduction to the project zone itself and, finally, how Pur Projet structured the REDD+ project there.

### **History of the valley**

The Huayabamba Valley is located between Peru's *sierra* (the mountainous Andean highlands) and *selva* (the lowland jungle), occupying part of what is referred to as the *ceja de la selva* (the eyebrow of the jungle). This advantageous location between the Andes and the Amazon makes the area rich in biodiversity – straddling multiple ecozones and altitudes – and strategically located to take advantage of trade between the coast, the mountains and the lowland jungle.

The Huayabamba Valley has been subject to cultural development since at least 8,000 BC (Schjellerup 1997), with larger settlements emerging from 200 BC (Church 1999). The historic groups of the region have been termed ‘Chachapoyan’ and while they were not necessarily united politically, they did display “distinctive cultural beliefs and practices” (Guengerich 2014: 40) and had large population centres and shared structures of cultural

significance. The region still bears testament to Chachapoyan culture, with many vast ruins, extensive trails and evidence of planting of domestic plants, particularly in the cloud forest highlands. It also lives on in the name of the capital city of the Amazonas region, Chachapoyas.

While the population of the valley was in the “many thousands” on the eve of the Spanish conquest (Church 1999: 22) – by which time the Chachapoyan communities had largely been conquered by and integrated into the Incan Empire – the first colonial period brought with it dramatic population decline and “the region was virtually left for centuries without permanent settlements and the vegetation allowed to grow without human interference” (Schjellerup 2000: 452).

Various government-led schemes have since attempted to colonise and cultivate the Huayabamba valley, stretching from the promotion of coffee haciendas in the north by the government of Ramón Castilla in 1845 (Young and Leon 1999) to today. The construction of the *Carretera Marginal de la Selva* road in the 1960s, however, was a particular landmark for connecting the region to national (and with it international) markets and expanding agricultural settlement (Young and Leon 1999). Agrarian reforms of the 1970s – in which politicians created a “myth of a land of milk and honey in the Selva with an abundance of productive land and good prospects for cattleholdings” (Schjellerup 2000: 451) – increased migration to the region from the Andes. Free land and cheap loans were offered to settle the lower lands of the valley with, amongst other crops, cattle and rice.

The real agricultural and migratory boom in the south of the Huayabamba Valley, however, came with the illegal growth of coca for production into cocaine for international markets in the 1970s and 1980s. Much of the valley was dedicated to coca production. Exact statistics for illicit production are unreliable, but as will be seen in Chapter 5, personal testimony from the valley shows that production was widespread, if not abundant. Indeed, as late as 1999 the adjacent Huallaga Valley was still considered the source of “[m]ost of the world’s cocaine” (Young and Leon 1999: 43).

The coca production and narco traffickers were soon followed by terrorism, as the valley became a battlezone between the Peruvian Armed Forces and the revolutionary guerrilla armies of the Túpac Amaru Revolutionary Movement (MRTA) and the Sendero Luminoso

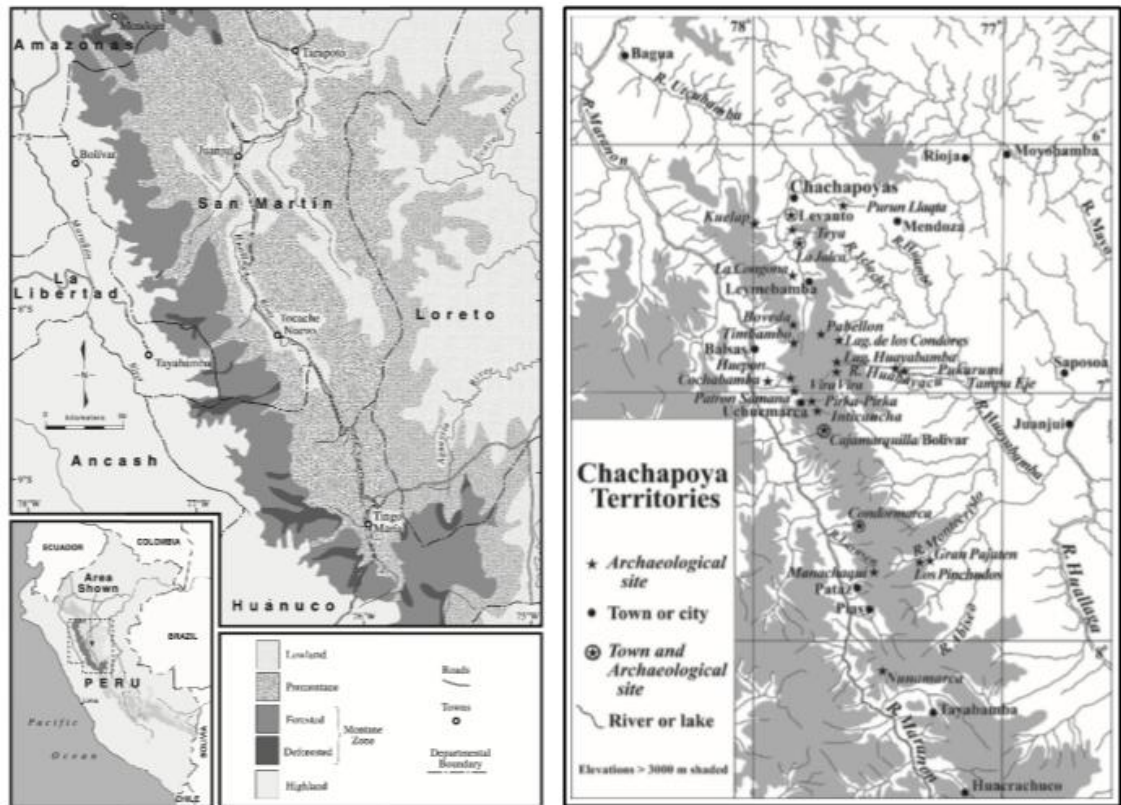
in the 1980s. Following the devastation of the war and ongoing illicit coca production, the Huayabamba Valley became a key focus for USAID programmes to fight the ‘war on drugs’, converting the degraded and abandoned coca plots into cacao. This programme continues to this day in the form of ‘Alianza Cacao’, with initial support for conversion to the high-yielding drought resistant CCN51 cacao, being complemented by the production of higher-value strains of the crop and alternative livelihoods programmes (this will be expanded upon in Chapter 5). The result of this campaign is the current economy (and ecology) of the south of the valley, with most local families focused on cacao production and regional leaders in the export of cacao emerging through the 1990s and 2000s – into which the Biocorredor Martin Sagrado REDD+ Project inserts itself.

### **Ecology and conservation**

From an ecological perspective, the Huayabamba Valley is considered part of the wider Yungas landscape and falls within the Abiseo-Condor-Kutuku conservation corridor, which stretches from Colombia, through Ecuador and Peru and into Bolivia (see Figure 3.2). Owing to its range of altitudes, it contains a diversity of different ecozones, this includes cold treeless grasslands above 3,800masl, slightly cooler areas with a similar soil and climate profile to many of the populated areas of the sierra between 900m-1800m and lowland jungle (Guengerich 2014). Between these, however, are the cloud forests which fall between 1,700-3,600m and offer an incredibly biodiverse landscape of flora and fauna (*ibid*) and a high level of species endemism (Young and Leon 1999). This makes the region an interesting case study for long-term conservation and reforestation strategies, as noted by Young and Leon (1999: 48)

“A lesson from the settlement history of precolonial times is that some montane forests, at least those in northern Peru, can apparently be used sustainably over several centuries. In addition, once human populations had crashed or emigrated, these forests seem to have recovered during the colonial and post-colonial periods.”

This biodiversity is considered somewhat surprising given the proximity to large population centres, both currently and historically. The contrast between biodiverse ecoregions and increasing agricultural production is striking and a short journey across the small region can contain bare hilltops, dense forests, high mountains, perilous valleys, clear streams, polluted rivers and many, many plantations.

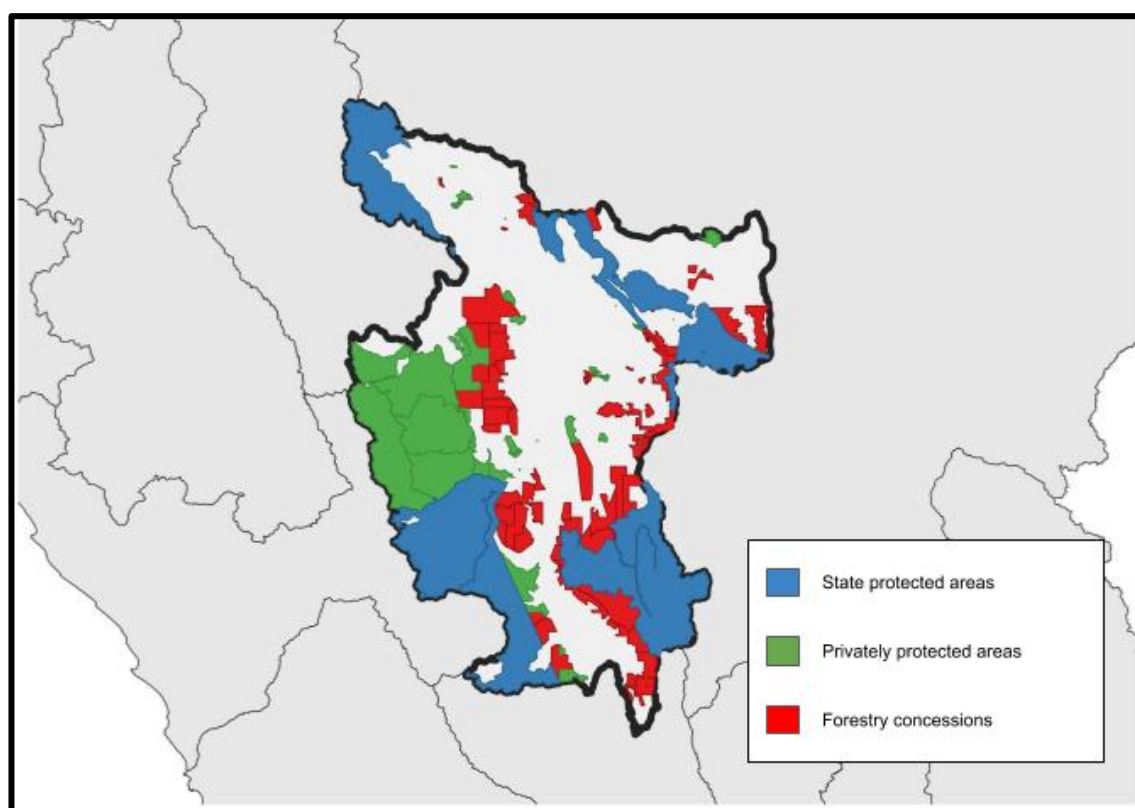


**Figure 3.2** Map of the valley in the context of the Yungas ecozone (left, Young and León 1999) and the Chachapoyan territory (right, Church and Von Hagen 2008)

To this day, San Martín remains one of the most densely populated regions of rural Peru (Shanee et al. 2015) and has faced increasing pressure from deforestation, suffering some of the highest rates in the country (Shanee 2013). In a bid to counter this deforestation, successive regional governments of San Martín have focused on the creation of protected areas, particularly from 2006 when the regional government of the day set an ambitious target of creating half a million hectares of protected areas by 2015 (Shanee 2012, see also Shanee et al. 2020). To do so, it embraced the creation of not just national and regional protected areas, but privately protected areas, offering opportunities to not only large landowners, but also local communities who were encouraged to apply to manage (often large) areas through concessions for conservation.

This history of conservation will be returned to in Chapter 5, but the resulting patchwork of national and private reserves, with associated buffer zones and management regimes makes the region a fascinating case study (see Figure 3.3). San Martín now has the highest concentration of privately protected areas in the country – covering 659,200 hectares of the region’s 5,125,300 hectares (*ibid*). This rapid growth in PPAs was aided by national policies

aimed at increasing the role of the private sector in biodiversity conservation in Peru, with a specific focus on accessing the emerging carbon markets.



**Figure 3.3** Map of protected areas in San Martín

### The legal context of carbon and PPAs in Peru

Peru has had to design a range of laws and rules to facilitate the abstraction and legal ownership of carbon, and it has done so at a rapid pace. The carbon strategy for Peru (Government of Peru 2016) is focused on the growth of a carbon offset economy, specifically through REDD+, improving agricultural and forestry productivity and land management systems (UFF Partnership 2016). The strategy of the National Forest and Wildlife Service (SERFOR), for example, is very specifically geared towards the *development* of forests. Focusing on the promotion of the sustainable use of forests and the incentivising of forest plantations for recovering degraded areas and increasing forested areas (SERFOR 2016). This fits with a wider approach to conservation in Peru, which places it within sustainable development plans and prioritises its profitable aspects (Shanee et al. 2020).

The national strategy for climate change and the work of establishing the national carbon market is the responsibility of two key bodies – the Ministry of the Environment and the

National Environment Fund. The National Environment Fund specifically manages the 'National Carbon Portfolio', which includes registered projects in voluntary markets, the Clean Development Mechanism and the development of state-based REDD+ projects, and promotes environmental investments in Peru to state and non-state actors globally. This includes forestry management and reforestation, which at a local level have additional supervision from the Ministry of Agriculture, SERFOR and from Regional Environmental Authorities, as well as the National Park Service for those that fall in state protected areas.

Peru's National Carbon Portfolio includes 50 REDD+ projects covering more than 6 million hectares (6,412,082), of which over 4 million fall outside of national parks (FONAM 2017, plus author's analysis) and 41 afforestation/reforestation projects covering just 195,441 hectares but with the potential to generate almost 60 MtCO<sub>2</sub>e<sup>26</sup> in 20 years (*ibid*). These figures show the scale of ambition for carbon credit-funded projects in the country and this is also reflected in the marketing of the adoption of protected areas or reforestation land as a means of investment throughout the country, by both private groups and government bodies. On an international level, The National Environment Fund body takes these proposals to carbon trade fairs and conferences to engage with "Governments, Carbon Funds, Investors and Technology Suppliers" (*ibid*) around the world, producing investor booklets which boast of the potential for forestry production in the Amazon.

The expansion of the carbon portfolio has been particularly aided by the focus on decentralisation in Peru allowing regional governments to quickly register plantations for reforestation or circumvent lengthy application systems for protected areas by establishing regional conservation areas or conservation concessions (see below). In these areas responsibility falls to regional bodies, rather than the more bureaucratic national groups (Piu and Menton 2014). REDD+ working groups can operate on a regional level and carbon investment opportunities for specific reforestation plots or forests can be identified and easily applied for through local governments.

The creation of privately protected areas is key to the growth of REDD+ projects. The designation of legal ownership, as established above, is the basis of creating a saleable asset in carbon and an essential element to being certified by Verra. Private conservation in Peru is largely facilitated through three types of official park designation – **private conservation**

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<sup>26</sup> 59,826,569.68 tCO<sub>2</sub>e



**areas, ecotourism concessions and conservation concessions.** As with other countries, conservation has historically been the preserve of the state in Peru and has become increasingly costly to manage and maintain<sup>27</sup>. Private conservation areas were designed to meet the demand for communities to be able to title and register land – and with it to obtain full ownership – in a new framework that exchanged these rights for guarantees of conservation. These were written into law in 2000 (Bury and Norris 2013), with the first private conservation area set up in 2001. Since this first park, 176 have now been registered covering a total area of 397,700 hectares (Shanee et al. 2020).

Conservation concessions and ecotourism concessions differ in legal status to private conservation areas, emulating the model of concessions granted to oil and mining areas and offering a 40-year ‘lease’ on the land. The lease guarantees all rights to the management and development of the land, but not ownership. This is, again, in return for meeting explicitly laid out conservation goals (or solely for ecotourism in the case of ecotourism concessions). This novel new form of conservation agreement was pioneered by Conservation International and the work of the NGO’s senior economist Richard Rice, with his colleague Jared Hardner (see Rice 2003). The first conservation concession in Peru was also set up in 2001 and, while data on concessions are not as readily published<sup>28</sup>, this has now grown to 98 with a total area of 1,488,800 hectares and a further 56 ecotourism concessions covering 101,300 hectares (Shanee et al. 2020). On average, conservation concessions are notably larger in size (15,190 hectares) than either private conservation areas (2,260 hectares) or ecotourism concessions (2,020 hectares). In total, this means that PPAs now cover 1,999,500 hectares of Peru. As noted in Chapter 1, the rapid growth in private and for-profit conservation has been particularly pronounced in San Martín, but to understand the changing political economy and ecology behind this in more detail a specific case study is required.

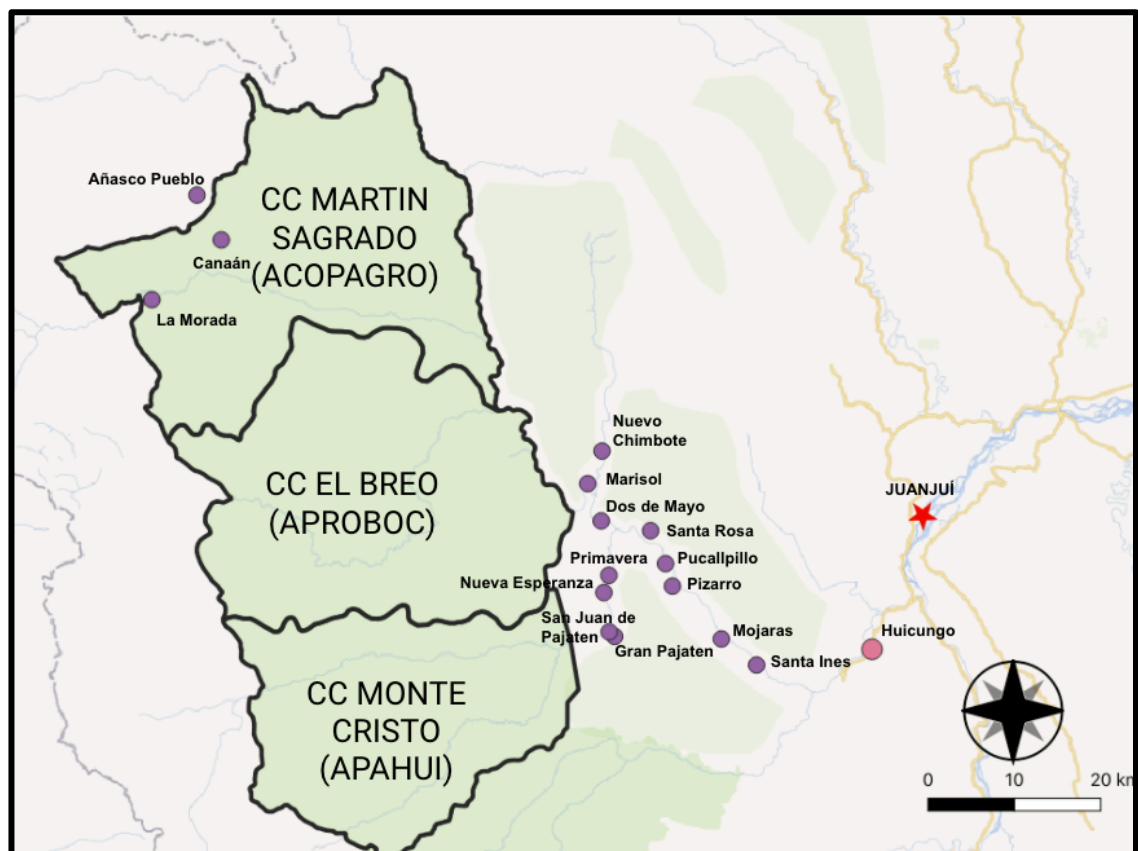
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<sup>27</sup> On Peru, for example, see the recent environmental report from ECLAC and the OECD (2016: 58): “Most of the funding for the conservation of biodiversity comes from the Public Treasury: that contribution rose by 500% between 2004 and 2010, but still falls short of needs. A study by the Universidad del Pacífico points to an annual budget shortfall of 115 million nuevos soles, or roughly US\$35 million”.

<sup>28</sup> The data presented here was collated by the researcher in conjunction with colleagues who were also compiling a database of PPAs in Peru (Shanee et al. 2020), but there are far more ‘unofficial’ concessions in the process of being applied for which do not appear in national statistics.

## Project Biocorredor Martin Sagrado

The largest of the privately protected areas in San Martín is the Biocorredor Martin Sagrado REDD+ Project. Formally established in 2010 and actually made up of three separate conservation concessions – Martin Sagrado, El Breo and Monte Cristo – the Biocorredor Martin Sagrado REDD+ Project covers 295,654 hectares of land of strict conservation areas (the ‘core’ zone), with Martin Sagrado accounting for 108,818 hectares, El Breo 113,826 hectares, and Monte Cristo 81,055 hectares (see Figure 3.4).



**Figure 3.4** Map of core concessions and associated villages, towns and cities

Formalised conservation in this part of the Huayabamba Valley can be traced back to the Rio Abiseo National Park, which was established in 1983 and is notable for the large Chachapoyan ruins it contains, Gran Pajatén, which dates back to 200BC. A large portion of what is now the Biocorredor Martin Sagrado falls within the old buffer zone of Rio Abiseo, with further parts of the current project area replacing the previous Huicungo Municipal Area for Conservation.

While this means that there were existing restrictions on extractive activities in the area, a lack of funding and various management problems meant that little actual enforcement was possible at a time when migration to the area was increasing (Young and Leon 1999). A common phrase reiterated to me by workers who were in the region at the time was that the state “didn’t have one sol to spend on the area”. It was within this context that the first conservation concession, El Breo, was granted in 2010, although work to formalise the local organisation and the process of applying for the concession was conducted prior to the arrival of Pur Projet (see Chapter 4).

There are a number of villages in close proximity to the concessions mostly alongside the Huayabamba and Jelache rivers, with 30 falling within the purview of the project and three communities – La Morada, Canaan, and Añazco Pueblo – located within the concession itself (alongside at least two family units outside of communities, see Chapter 4). Most of the communities in the south of the valley rely on cacao production – as will be explored in Chapter 5, some communities in the Huayabamba Valley claim to have more than 90% of families involved in cacao production – with maize, bananas and oranges also common, as well as pockets of illegal coca production. Cacao is sold either as part of local cooperative schemes, at one of the many collection points in the villages or directly downriver, either dried or in their natural juices (*‘en baba’*). Each day boats filled with bags of cacao and bananas make the trip downriver stopping off to pick up more supplies and passengers at each of the villages, with rice, chickens and basic staples making the reverse trip. The villages in the north of the project zone tend to rely on coffee production or cattle, which is the main focus of productive activity in the villages within the Martín Sagrado concession.

The villages range in size, from small communities of 30-100 people, to ‘population centres’ of over 1,000 (and in some cases 2,000) people and many have basic health centres and primary, and in some cases secondary, education, with trips between the villages made by small boats or rubber rings alongside the larger boats which ferry between the main population centres.

The history of the project will be discussed in Chapter 4, but multiple actors have had to come together to secure and manage the land. Aside from Pur Projet, which will be introduced below, the key actors in this assemblage are as follows:

- *Producer associations*: Most villages have formalised farmer cooperatives or associations (in most cases producers of cacao, but also coffee and cattle in the north of the zone). A registered association is also a prerequisite for applying for a conservation and these associations are thus central to how the project is owned and managed. In the case of the Biocorredor Martín Sagrado REDD+ Project, the rights to each concession has been granted to a local association with its own management team.
- *Fundación Amazonia Viva (FUNDAVI)*: Pur Projet established a local not for profit NGO, FUNDAVI, to manage the project, working closely with multiple local cooperatives and associations to implement the monitoring and administrative elements of the project (Pur Projet 2012a). These groups work closely together, with an official technical meeting on a quarterly basis in the FUNDAVI headquarters in the local town of Juanjuí.
- *Regional Environment Authority (ARA, Autoridad Regional Ambiental)* – ARA has the right to grant and rescind concessions regionally (under the regional government) and is responsible for their monitoring. Concessionaires are required to report annually to ARA, with an in depth review every five years.
- *The San Martín Regional Government (GORESAM, Gobierno Regional de San Martín)*: The regional government provides additional support to develop the local economy, including through local, municipal governments and mayors. In particular, the regional department for agriculture is responsible for projects involved in agroforestry and conservation.
- *The Agency for the Supervision of Forest Resources (OSINFOR, Organismo de Supervisión de los Recursos Forestales)*: OSINFOR oversees all protected areas in Peru through a number of regionally distributed offices. OSINFOR has the power to issue fines for non-compliance with obligations established under the granting of concessions.
- *Local NGOs*: Various local conservation NGOs provide additional support and technical capacity which is lacking at a local level. One local group, for example, assisted in the application for the El Breo Conservation Concession and continues to provide substantial support locally.

## Pur Projet

Alongside these groups, the project developer and driving force behind the wider Biocorredor and REDD+ aspects of the work is the French company Pur Projet. The co-founder of Pur Projet was already working in the valley prior to establishing the company, in their role with a fair trade chocolate company. This position led them to work with the local cacao cooperative, ACOPAGRO, establishing a reforestation project in 2008 that would provide the blueprint for Pur's future business model, while searching for opportunities to start a larger REDD+ project<sup>29</sup>.

Despite being chiefly created for the generation of carbon credits for the voluntary market, the project is designed to create multiple opportunities for the communities involved, including better revenue for export crops such as coffee and cacao, livelihood diversification programmes such as beekeeping and fish farms, and the long-term promise of ecotourism and, in particular the production of timber through Pur's agroforestry approach. This approach generally advocates the focus on a single crop for export, alongside reforestation activities (Pur Projet 2012a).

The reforestation schemes generate carbon credits by planting trees on 'degraded land', often in plantations, intercropped with export produce or among grazing animals. The resulting agroforestry plots are designed to improve production or provide new revenue streams through (sustainably-harvested) timber, with trees to reach the minimum requirement to be considered 'forest' (by height, crown coverage and area), in this case by the Peruvian state, and thus be eligible for carbon credits.

Thus, while Biocorredor Martin Sagrado is at the core of Pur's work in the Huayabamba Valley, there are multiple streams of work which combine to support an overall landscape strategy. To fulfil this work, Pur has teams dedicated to three administratively separate, but complementary areas: conservation, reforestation and impact investing<sup>30</sup>. In total this work represents over 8.5 million trees planted and 215 million more 'under conservation' in the Huayabamba valley and has been commended both locally, nationally and internationally.

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<sup>29</sup> Other groups were contacted by Pur about establishing REDD+ projects at this time (Cahuata and Angerand 2014).

<sup>30</sup> The impact investing is a relatively new initiative seeking to create new high-value markets from more diverse cropping systems.

Beyond the direct project activities the combination of projects on the borders of the concessions and an expanding network of other PPAs alongside the Rio Abiseo National Park now form the Gran Pajatén Biosphere Reserve (see Appendix I). This recently formed biosphere reserve, securing its designation in 2016, spans close to 2.5 million hectares with the local managing NGO of the REDD+ project, FUNDAVI (see above), key to its formation, vision and ongoing management strategy.

Pur sells verified carbon credits from the reforestation and conservation schemes on the voluntary carbon markets, a direct sales process which involves finding buyers and convincing them of the value and security of the credits – not to mention their relative benefits over other sellers' credits. In this, it has been very successful, working with companies to offset carbon emissions through a suite of 40 projects around the world, typically reforestation and agroforestry but including their sole conservation project in Peru, Biocorredor Martin Sagrado. Pur has a number of high-profile clients attracted to their approach and reputation, such as ice cream company Ben and Jerry's, Nestle's single-use coffee pod brand Nespresso, the largest non-US based hotel chain in the world Accor Hotels and France-based global fashion and beauty brands such as Clarins and L'Oréal.

To investigate the fascinating coming together of dreams and desires, with law, science and practice that creates the new forests of for-profit conservation, required a novel combination of methodological approaches. For the purposes of this research, I decided that doing so would require observation both on the ground – in how people conceive of the project as above – and in the language and practice of those promoting for-profit conservation – NGOs, journalists, businesses, financiers and government bodies included. Doing so allowed me to analyse the complexity of these value chains both in the production of socionatures and the projection of dreams and desires, attending to the gaps in literature identified in the previous chapter. The next section of this chapter details the methods that were employed to do this.

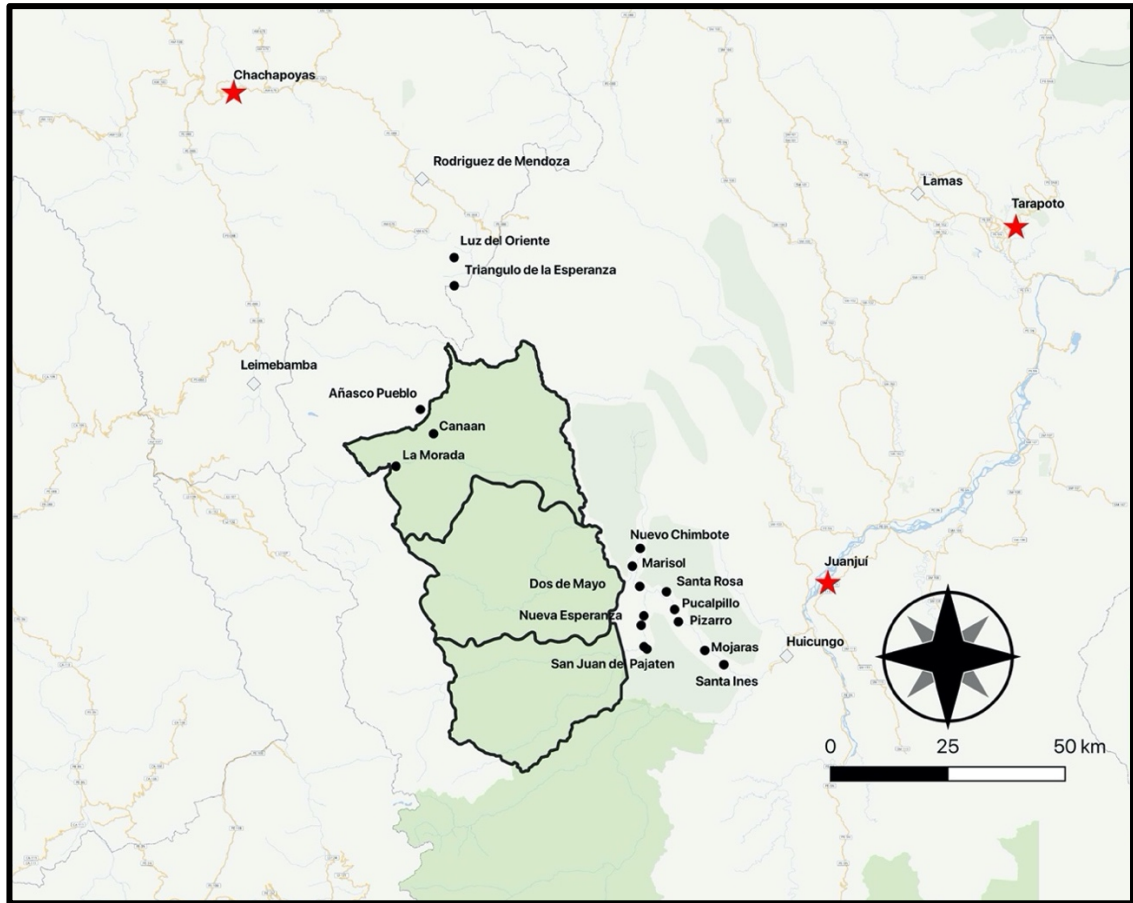
## Methods

### Logistics

The multi-sited nature of this research meant that while fieldwork began ‘on the ground’ in Peru, further work was also conducted through interviews with Pur Projet in France and digitally, via research into those promoting land adoption and with the consumers and supporters of these projects. Conducting fieldwork in this way carried an inherent need for flexibility in approach, being reactive to where the project led and treating the original research design in a more iterative, dynamic and collaborative manner (as per Marcus 2005).

While taking place in multiple sites in Peru and beyond (and interspersed with the writing up of research and movement between locations), fieldwork was based predominantly in the western part of the San Martín region. In total, 12-months of fieldwork was conducted in Peru between 2017 and 2019, largely based in the communities in the south of the project zone stretching up the Huayabamba river and the local town of Juanjuí (see Figure 3.4).

While travel was essential to appreciate the breadth of the project, the village of Dos de Mayo was used as the base for longer-term stay. One of the largest communities involved in the project (a village of around 1,500 people), Dos de Mayo is situated on the edge of the El Breo CC (see Figure 3.5) and members of the community have been involved in conservation work in the valley prior to the establishment of the project. The village provides a useful location to access multiple other communities, sitting at the confluence of the Huayabamba and Jelache rivers, and serves as the chief access point to the core zone of the Biocorredor Martín Sagrado REDD+ project. It is close to the key guard post for conservation monitoring and the main tourist attraction within the concession, the El Breo falls. This allowed for observation and interviews with the various park rangers, scientists, tourists and officials visiting the concessions.



**Figure 3.5** Map of wider project area and key villages, towns and cities

Juanjuí, the provincial capital and closest town to Dos de Mayo, served as the other key fieldsite, with the FUNDAVI headquarters being located in the town and serving as the site of various meetings. It also offered easy access to further government offices and local operations in the regional capital of Moyobamba (four hours' drive) and the region's largest city, Tarapoto (two hours) where significant time was spent interviewing regional government representatives and local NGOs. Visiting communities in the north of the project zone required a different entry point to the valley, via the town of Rodriguez de Mendoza, near Chachapoyas in the Amazonas region.

In total, 18 villages of the 30 involved in the project were visited, alongside numerous larger population centres associated with project management and governmental oversight. While numerous conversations and observations were made in this time, 68 interviews were conducted in a more formal manner. Other villages beyond the purview of the project were also visited to allow for a wider understanding of the local political economy with regards to conservation projects. This included a short time working with native communities near the



city of Lamas, for which a basic level of the local Quechuan dialect was learned and a translator hired. These locations are summarised in Figure 3.5.

### **Participant observation and fieldnotes**

At each of these locations, and indeed when travelling between them, participant observation was the key method of investigation. As far as possible, attempts were made to integrate into project management, often shadowing key project workers within FUNDAVI or the local associations managing the concessions.

This work took many forms: from going on patrols with park guards, spending time in local offices, working with farmers in agroforestry (and non-agroforestry) cacao plots and attending the many meetings which constitute life in the valley. Indeed, the numerous project meetings, which happen on an almost daily basis, and travel around the valley were particularly important for understanding the role and challenges of those managing and promoting the project. Time was also spent integrating into community life, including assisting in the farming, reforestation and monitoring work. Living and working within the community in this way gave a better understanding of how the project is affecting different members of the community, showing how power is inscribed in the new rules and restrictions and where frustrations with the project lie in the form of ‘everyday forms of resistance’ (Scott 1985).

This process was conducted in conjunction with the taking of extensive fieldnotes. Fieldnotes were, broadly speaking, taken in three formats: rapid field notes covering as clear a representation of observations as possible, a separate notebook for analysis and interpretations of events and conversations and a final book for personal reflections. Notes were clearly labelled with dates to allow for comparison and to crosscheck data for bias.

### **Interviews**

Interviews were critical to both understanding responses to Pur Projet’s work in the Huayabamba Valley and to securing the time of senior officials in the project and the wider groups involved in conservation in San Martín and Peru. Throughout the research they took a range of forms, from structured and formal interviews, to unstructured chats. This made it

hard to draw a line between day-to-day conversations with respondents and ‘official’ interviews. In this research, the line was drawn somewhat arbitrarily as when a discussion was recorded (or in the absence of a recorder or an expressed desire by the respondent not to be recorded, the decision was made in lieu). Thus, while 68 interviews were conducted for the research, this thesis relies on a great deal more conversations conducted throughout fieldwork. All interviews were conducted in Spanish by the researcher, although a translator and guide was used for visits to Quechuan communities.

Many of the key individuals for these interviews were identified prior to – and met during – the scoping trip conducted in 2017. These formed the basis of a wider network of connections for further meetings utilising a snowball sampling approach. Understanding and mapping this network was in itself important for the research (particularly with regards to understanding the dynamics of dispossession which is required to build a cogent Marxian analysis of the structures at hand). It helped to explore the structures and cultures within which people operate, both within their own organisation (Froschauer and Lueger 2009) and within their broader ecosystems (Pierce 2008). The snowball sampling approach served a dual purpose in this sense, opening the door to further interviews, as well as providing an understanding of how these connections and relationships function.

Interviews were generally conducted in the second half of the fieldwork period, allowing time for rapport to be built. This ensured a greater degree of trust, with which some research subjects felt comfortable discussing more contentious issues such as frustration with the project and non-abidance with conservation rules (thus bringing to light forms of resistance see Scott 1985, Mathews 2005). While more time or a specific focus on these disaffected groups would no doubt have provided a great deal of interesting information, the approach here can be said to bring to the surface some of the many issues that are threatening to bubble up in the communities.

So called ‘elite interviews’ were thus equally important to the research. While I would hesitate to draw a line between who might, or might not, be considered ‘elite’ (see also Smith 2006), interviewees took diverse positions from leaders of government bodies, to regional conservationists, from cacao farmers, to the Pur workers in Paris. While this at times required a different method of approach to arrange the interview and, on a few occasions, to conduct it, the research is more concerned with connecting the answers these varied respondents gave

to show what ideas travel and what is obscured. Thus, while much can be understood of the stories and utopian visions that are constructed in private conservation projects from speaking with actors on the ground, ‘elite’ interviews provided an invaluable chance to explore how these narratives were adopted, adapted and spread by others, and which ideas and narratives might be travelling the other way.

Methodologically, this required a predominantly semi-structured approach to the interviews, with a focus on open questions. This ensured a more open dialogue between the interviewer and interviewee – creating the space for people to explore wider dreams and hopes of projects, as well as narratives and life stories (following Elliott 2005). This blurring of the lines between ethnographic or narrative approaches in both elite and non-elite interviews has been recognised as being able to expose the tacit knowledge and beliefs that they themselves aren’t aware of (Meuser and Nagel 2009). In this research, this helped to show, not just expert knowledge of how project finance works or what effect it has had on community life, but where excitement and desire lay. This provided the symptomatic reading of the situation necessitated by an approach focused on understanding ideology and unconscious drives and desires.

### **Document analysis**

Further to the interviews and observations, fieldwork also provided access to a wealth of documentation and analysis of the projects in the Huayabamba Valley – from the local NGO, FUNDAVI, and external consultants – as well as to the wider marketing material surrounding conservation and reforestation in the region. Analysing this information required archival research of local documentation, legal applications and project design documents, in parallel with the interviews with park officials, local communities and project staff. This would not have been possible without the transparent approach adopted by both the project and the regional government, who shared a great deal of information willingly and referred relevant studies and data throughout the research.

Discourse analysis in the vein of the critique of ideology (as outlined above) was also employed to analyse websites, promotional videos, social media engagement with the projects, policy and white paper analyses and other ways Peru, the Amazon and the project are represented to the wider public. This combined multiple streams of enquiry, but

cumulatively was used to analyse the framings around for-profit conservation and assess the power of interventions in producing identities, environments and ethical norms.

By exploring any contradictions at the heart of these materials, this ideological reading also helped to assess possible long-term negative outcomes – such as the co-option and pacification of local resistance<sup>31</sup>, the instability of tenure, or the consequences of exchanging communal property rights for private ownership.

### **Geographic data**

Geographic data also played an important role in analysis, particularly on the number and distribution of PPAs, as well as on cacao production and forestry plantations. This data was collected from various sources, but chiefly the Peruvian National Service for Protected Areas (SERNANP, <http://www.sernanp.gob.pe>), OSINFOR (<http://sisfor.osinfor.gob.pe/visor/>) and GORESAM (<https://www.regionsanmartin.gob.pe/>). This data has been synthesised (in collaboration with colleagues) elsewhere (Shanee et al. 2020) following a process of compiling and cross checking data using ArcGis and later QGis.

### **Triangulation of data**

A challenge, and opportunity, with the methodological pluralism employed in this research is the triangulation of data required to ensure the accuracy and reliability of findings. By its nature, this process is open ended and inexact, but as noted by Doolittle (2015: 519) in the context of political ecology, it can “shed light on different dimensions of a phenomenon, enabling a more detailed and rounded understanding of how rich and complex a socio-ecological system is”.

While, in some cases, this meant the weaving together of diverse data sets to help assemble a wider picture, triangulation was also used to validate, or challenge, certain positions (see also Busscher et al. 2018). This iterative process allowed the research to explore specific structures and test initial results to understand the dialectical relationships and tensions

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<sup>31</sup> As noted by Webber (2017) on a grand scale in the case of resistance to extractive regimes in Ecuador for example

within them and was done in constant reference to the comprehensive field notes taken during fieldwork to ensure accuracy and comparability of data where possible.

The fieldwork was also structured to aid in this process. Having three distinct time periods in Peru allowed time for the collection and analysis of data in-between trips. This meant that initial analysis could be discussed in interviews and public forums (where appropriate), which was particularly the case for the final period of fieldwork (February-May 2019), where initial findings were shared with participants, allowing their fairness as a representation to be either supported or questioned.

## **Limitations, Positionality and Ethics**

The methodology and methods laid out above carry with them certain limitations and ethical considerations. Furthermore, any research conducted in the social sciences or humanities faces the same questions when reflecting on proposed plans – in whose benefit is this research and at whose cost? This section will introduce some of the issues with regards to positionality, ethics and integrity encountered and considered during research.

Many of the limitations of the research can be traced back to the decision to focus on the breadth of the project to make wider claims about power, ideology and the workings of capital, rather than taking a more traditional anthropological approach of focusing directly on a bottom-up understanding of the project. With the fieldwork timeline designed to provide as clear a view as possible of the project, and the intersections between global capital, regional politics and local outcomes, time with individual communities was often limited. Visits were spread over the three separate trips, to compensate for not living and working with one community for a long period, but following the project, rather than focusing on a single community produced definite limitations. While research was conducted living within communities and focused on participant observation, semi-structured interviews and storytelling, without a clear role in the community (such as a job<sup>32</sup>) or a period living there without needing to travel to meetings, interviews and other appointments, the depth of observations must be understood as different to a genuine anthropological study of the communities themselves.

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<sup>32</sup> The value of working within communities has been noted by many ethnographers, but see particularly De Neve (2001), Prentice (2008).

The research, thus, has less to say about local desires for the area than at the project-level, and data on how attitudes towards the environment are changing lack the depth of long-term ethnographic enquiry. Limited time in the area also made it very difficult to gain the trust necessary to access certain groups and ‘social performances’ (Amit 2004). As noted by Amit (*ibid.* 12), “the access of ethnographers ... has always been limited, whether because some local arenas were restricted to long-standing intimates or to people of a certain gender, class, ethnicity, ritual status, etc”. Such was the case in this research where my own personal access was restricted, for example, by gender, which at times made private discussions or interviews with female members of communities difficult or inappropriate and limiting the depth of understanding of the gender dynamics within the project.

Interviews conducted in communities across the project highlighted the diversity and complexity of reactions to the project and how intertwined it was with the varying histories, experiences and hopes that groups had. A greater focus on any one of these communities would have been an interesting approach in itself, but efforts were made wherever possible to attempt to gain a more emic understanding of individual communities and “the meanings they place on events in their worlds” (Heyl 2007: 369). This also made interviews critical to rapport building and efforts were made to give people time and discursive space to reflect more broadly on the project. This was challenging at times, but many insights came from respondents being pushed to think beyond the confines of the project. Given more time living within a community or a different methodological approach this could have been explored further.

The (comparative) lack of time within communities also raised issues with how the research and the researcher were represented to participants. As much as efforts were made to explain the ideas being investigated (and the reasons why) to people, there was an obvious disconnect or lack of interest at times with the deeper aspects of the analysis (see Mosse 2015). This was notable for example with focus groups, which in early research design had been seen as an important method of data collection. In reality, when these were trialled the results were poor, with some people uncomfortable sharing information in this way and an undeniable sense of ‘outsider fatigue’, thanks to regular contact with researchers and verification teams in the area and the many project meetings. Equally, plans to share data and build on analysis in an iterative manner with local communities were not as simple as planned, as on return to

the field site there wasn't time, space or desire to discuss the work alongside the many other meetings and concerns that were ongoing. The work in this case was more irrelevant to local experiences than would be hoped from a reciprocal research design. I found in this case, a more uncomfortable dynamic of needing to use people's time in some cases, and my role and position being used at others – for example, with me being written into delivered project objectives or my presence being highlighted at regional meetings as an endorsement of the project.

This dynamic at times also created some confusion as to my position as an independent researcher, rather than being part of the project, especially given my level of integration with the project team. Despite efforts to explain to the contrary, this scepticism was noticeable for a long time and caused confusion with many participants. With any critical research project there is a balance to be struck between a level of (at least assumed) detachment and an engagement with the politics of the situations we work within, but in this case there were clear power dynamics between project leaders and local communities which I was being inserted into. Drawing a clear line between the role of the researcher and the role of the project became all the more important in this instance, but it was essential to remain mindful of the fact that however I wished to appear, I was an active participant in ongoing processes.

This conflict also highlighted the importance of granting respondents anonymity. This is something that has been noted as particularly important in research in conservation in Peru, due to the endemic levels of corruption and potential negative implications of the exposure of individual practices (Weisse and Naughton-Treves 2016). Furthermore, there were many project workers, association heads, government employees and otherwise whose right to confidentiality and anonymity was crucial in allowing them to be open and honest with responses. These projects, regardless of their long-term implications, also provide critical funding streams to many communities that it would not be appropriate for this research to jeopardise. Given the failures and non-compliance witnessed at times, any breach in confidentiality and anonymity could be highly damaging to individuals involved.

Given these implications, the proposal for this research was subject to a formal ethical review process by the University of Sussex Social Sciences & Arts Cross-Schools Research Ethics Committee and all efforts were taken to guarantee the highest possible levels of anonymity (in line with the Association of Social Anthropologists standards, see ASA 2011).

Pseudonyms were used in notes, transcripts and all subsequent written reports to ensure participants are not identifiable in any published, or private, material. Prior to the commencement of fieldwork research, the project was introduced to the relevant groups involved, including via the formal presentation of the research goals, approach and rationale and providing all recipients with a project information sheet and consent form (in Spanish). In situations where this was not possible or suitable (for example, where respondents were unable to read or understand the documents), the content of the project information sheet was explained verbally and consent received before any interviews. Participation in the study was voluntary and if at any point participants were considered to be vulnerable to identification, or merely uncomfortable with the project, all data was to be removed from the study. It was also made clear to participants that at no point would any personal information be disclosed.

The high-profile nature of the project raised specific issues with this anonymity, as parks, concessions and groups involved are publicly identifiable and all have an online presence. While changing organisation and place names was considered, the sheer scale of the project (the largest of its kind in Peru) combined with the data that would be presented would have made this anonymity superficial. Furthermore, many of the groups that anonymity may be used to protect from (such as governmental organisations) were already aware of my presence within and research on the project. As such, organisations, parks and places are discussed by name here and greater attention was paid to anonymising the individuals working and living within them. These are both anonymised and at times referred to without clear identifiers in this thesis. For example, where an interview is referenced, related associations/organisations or villages of residence may have been removed at the discretion of the researcher if it was felt that it provided necessary further anonymity. Given the commercially sensitive nature of Pur Projet's work discussed here, a draft of the thesis was provided to them in advance of submission allowing them a right to reply – an approach agreed with the company in advance of the drafting of this research.

This anonymity does raise an interesting issue when using ethnographic methods to investigate global practices, which suggests a slight detachment from the goals of the communities central to the study. The findings do not necessarily highlight the differing goals of the groups worked with, but how this might have been misrepresented. While this suggests certain weaknesses inherent to projects and helps to bring subjugated voices and knowledges



to the surface of the debate, there is a danger it does so without being reciprocal in how this knowledge is shared back to these communities and organisations. More broadly, while the wider goals of the project can be hoped to add to our knowledge of political ecology, there was still a need to ensure that the research was not just ‘excavating’ data to further the self-interest of the researcher. The difficulty in ensuring the research is reciprocal is noted above, but it was conducted in ongoing dialogue with Pur Projet in the hope that results can help to inform new approaches being designed. Indeed, one of the successes of the project has been its ability to change and take on new ideas and throughout this research project workers have taken on board criticisms and observances from the field, even when it contradicted the data they themselves have collected.

Most importantly with these reflections on the ethical dimensions of research, was the need to appreciate the wider context within which academic study takes place and in doing so to accept the responsibility and integrity required of conducting it. The brief reflections above highlight the key issues at hand, but were combined with constant reflection throughout the research and writing up processes.

## **Summary**

This chapter has summarised the research design that this thesis builds from, focusing on a methodologically plural approach to understanding the case study of the Huayabamba Valley. While the limitations to this approach are not insignificant, following the project – and the flows of capital, commodities and discourses – and applying a range of methods to do so provides an original perspective on how for-profit conservation functions, and the motives, dreams and desires that are reshaping the worlds of conservation and development in forested (or deforested) areas.

This methodological pluralism will be evident in the four empirical chapters that follow, with each taking an interrelated, but slightly different theoretical approach and concerning distinct geographical scales, but all attempting to “gain an ethnographic purchase on global connections” (Tsing 2005: 3). The themes and ideas that run through these chapters will be returned to in the conclusion where the streams of enquiry will be brought back together.

Before moving on to the first of these chapters, outlining the structure of Pur's work in the Huayabamba Valley and the process of taking carbon to market, it is worth reflecting on the more general approach laid out here. The data provided and ideas put forward are not to analyse the success or otherwise of the project, but to raise questions and issues in a rapidly growing discourse and approach. To, as noted above, "interrupt stories of a unified and successful regime of global self-management" (Tsing 2005: 271). The research, thus, doesn't seek to prove that power dictates practice or that outcomes are set in stone, but to highlight the individual agency involved and the broad range of pathways available – now and through the development of Pur's work in the Huayabamba Valley. The chapters that follow should be read in this spirit.

## **Chapter Four: Finding Carbon and Selling Co-Benefits – Private Conservation, Carbon and Capital**

“We were born in the heart of the jungle, without thoughts of ‘benefits’. No-one knew about our work to start with. We were expecting a smaller project, smaller amounts of money to start” Founder member of conservation association, APROBOC.

At the heart of this research is a series of questions about how we present and produce the natural world and the changing nature of trees, forests and landscapes under for-profit conservation. Despite the seemingly simplistic logic of REDD+ – and certainly its marketing to companies and consumers – the rigour and secure property rights demanded by the market are rarely found in a typical forest conservation project. Behind the rhetoric of sponsorship, adoption, concessions and custodians are implications for who owns what and who has the right to dictate and create value.

Understanding why carbon has become profitable, how value is created and captured, and what this means for voluntary market projects is thus critical for understanding for-profit conservation. The process of identifying, privatising, registering and selling a carbon credit is a long and technical one, which, in this case, stretches from the forests of Peru to the boardrooms of France. This chapter explores this process to analyse how funding structures, international marketing and local politics impact on project design and management. Specifically, it asks who these structures and formations of property rights favour, and how and where money flows.

Here, I trace the journey of forest carbon as a commodity from its conceptualisation through to its abstraction and sale, building a clearer picture of the motion of capital within voluntary carbon markets. In looking specifically at the flows of capital and carbon in the Biocorredor Martin Sagrado REDD+ Project and the work of Pur Projet in the Huayabamba Valley, it adds context and specificity to the ongoing work analysing the production of carbon for offsets (see for example Smith 2007, Bumpus and Liverman 2008, Carton and Andersson 2017, Ouma et al. 2018, Palmer 2020). Applying the insights from Marx’s theory of the production and capture of surplus value to the emerging voluntary carbon markets will help to analyse the laws of motion of carbon as a commodity. In doing so, this chapter looks beyond the effects of commodification or the extension of markets, to the sphere of

production to see how the non-human world is incorporated into financial processes (Boyd and Prudham 2017).

Analysing where value is created and captured in the voluntary carbon market – or “how value travels in the global political economy of conservation and development” (Büscher 2014: 79) – complicates the simple offset/compensation model associated with REDD+. By highlighting the critical role of narratives and connections in selling credits, I will argue here that attention must be paid to these areas alongside the transaction costs and structural requirements that restrict REDD+ projects to certain groups (Asiyanbi and Lund 2020). This will, in turn, situate financial expansion into the natural world within the context of wider moves in the global economy and the interplay between profit, interest and rent in modern capitalism – and what this can tell us about equity and exploitation (following Boltanski and Esquerre 2016, Andreucci et al. 2017, Fraser 2017) in the voluntary carbon markets.

Following the previous chapter’s introduction to Pur’s work in the Huayabamba valley, here I will begin by explaining how this work is marketed as credits on the voluntary market, before assessing in turn: the process by which exchange value is generated through carbon; how surplus value is captured by Pur; how this is distributed across the project; and how this leads to a need to expand and increase surplus value. In exploring these issues, this chapter will show how market demands dictate local practice and help to frame the issue of privatisation in voluntary carbon market projects by answering a simple question – what is the marketing pitch and why does it matter? – providing the political economic context on which the ethnographic evidence in the rest of the thesis will build.

## **Selling Carbon on the Voluntary Markets**

To understand the interplay between conservation and reforestation in the various projects in the Huayabamba Valley requires an analysis of the role of voluntary market carbon buyers in dictating the value of offsets. Prices on the voluntary markets are not simply a generic price per tonne of carbon but are driven instead by a combination of the specifics of the project that is being sold and the buyer’s confidence in the seller. The former is of particular importance in selling an offset credit at a higher price. As noted by Ecosystem Marketplace: “When choosing which offsets to buy, end buyers are looking for ‘charismatic’ offsets that

emphasize co-benefits like economic growth or biodiversity preservation, and they are often willing to pay higher prices for them” (Hamrick and Gallant 2018: 23).

Reforestation credits hold several advantages here over conservation credits, as highlighted by Pur’s sales and marketing teams the ‘co-benefits’ of planting of trees are far easier to explain to clients than the complex, contingent and crisis prone nature of conservation work. Put simply by one Pur employee: “I would say in reforestation projects the main competitive criteria is it's very easy to understand. You plant a tree!”. This advantage is also reflected in average market prices for offset credits. While the average price of voluntary market ‘verified emission reduction’ was \$3.0/tCO<sub>2</sub>e in 2016, ‘forestry and land use’ projects commanded a premium; a higher average of \$5.1, of which REDD+ credits were paid at \$4.2/tonne and reforestation at \$8.1 (Hamrick 2017). Such is the attraction of reforestation over conservation at the moment that one long-time conservation worker in Peru cannily joked to me that he should rebrand his organisation’s conservation work as "avoided reforestation" to appeal to funders.

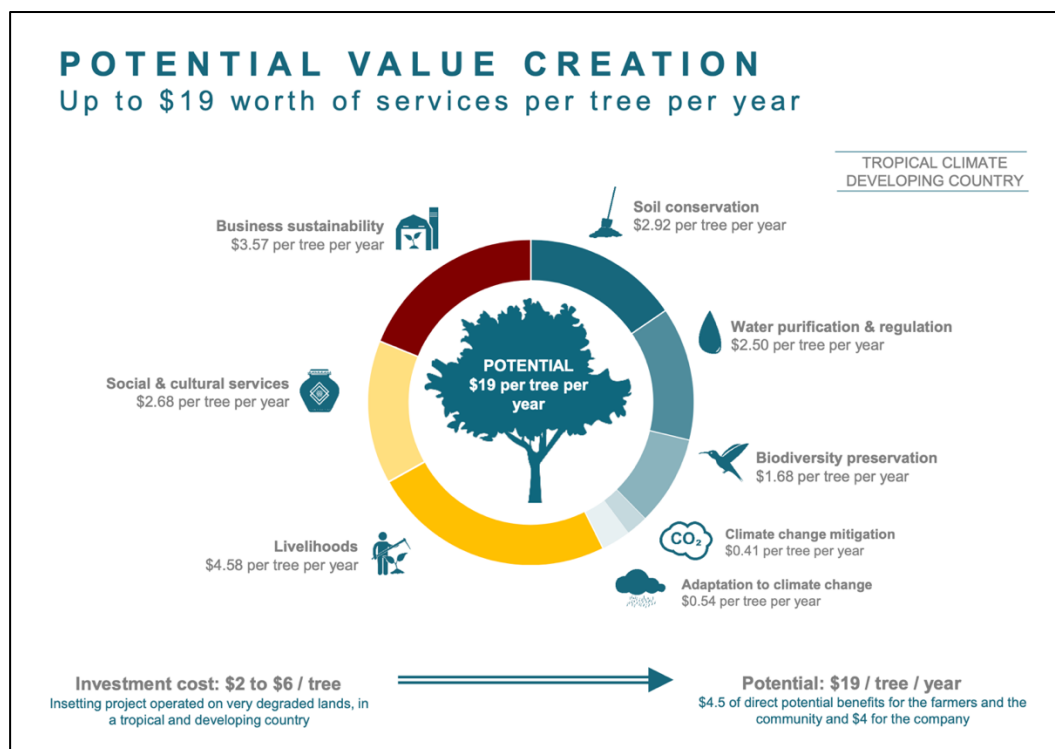
Pur has been very successful at emphasising (and selling) these ‘co-benefits’ in both their reforestation and conservation projects, particularly in linking the benefits of its approach to reforestation with the carbon credits generated from conservation areas. The initial average price of the credits that Pur sold from the Biocorredor Martin Sagrado project was even higher than the average for reforestation at around \$8/tCO<sub>2</sub>e<sup>33</sup>. Moreover, a new deal has since been signed with a global fashion brand for the credits generated by the Biocorredor Martin Sagrado project at the price of over \$10/tCO<sub>2</sub>e in 2019.

Staff attributed the high value of the credits to the company’s ability to both explain in quantitative terms the value of its co-benefits and to be agile and responsive to client demands. As described by workers, the sales process involved not simply providing a generic offset or listing projects online, as noted by one employee “it's not [...] kind of, 'knock knock,' 'hi, Pur Projet, I want x carbon credits, can you sell them to me and can I put [your] logo on my [website]?' [...] This is not how we work at all and it's not the relationship that we have with our current clients or that we want to have”. Instead, the focus is on working closely with clients to find projects relevant to their business and, crucially for Pur’s employees, working to build a broader sustainability strategy within the company.

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<sup>33</sup> Exact figures are not shared in this document as they are contractually sensitive.

This focus on co-benefits and client relevance is perhaps best explained through Pur’s concept of ‘*insetting*’ – a term promoted by Pur and one of its co-founders, who has also founded the ‘International Platform for Insetting’. Insetting refers to the offsetting of a company’s carbon footprint *within its own supply chain* – or “interventions that are directly related to a company’s value chain, either by geography, production, or commodity”<sup>34</sup> – and are for the most part focused on nature-based solutions, such as tree-planting. For example, a coffee company could ensure its producers also plant trees at source in an agroforestry system, offsetting the emissions generated by the rest of its operations, while also improving the production process through a range of benefits to soil, water systems, air quality and crop quality. This means that the ‘return on investment’ for planting trees is far greater than if a company was paying for offsets alone, (see Figure 4.1). For Pur, this return on investment is their key differentiator against other offset schemes, as they go beyond a simple exchange model to work with companies to analyse their wider business footprint and ameliorate the environmental damage caused.



**Figure 4.1** Pur Project’s co-benefits of tree planting (source Pur Project)

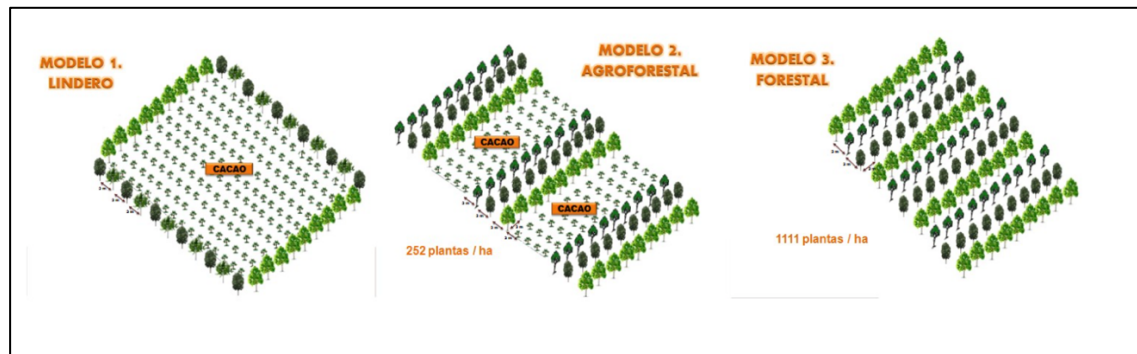
<sup>34</sup> <https://www.insettingplatform.com/insetting-explained/#1600200707322-bc52c021-32b4> [Accessed 4 November 2020]

*Insetting* informs Pur's strategy and approach in the field, which builds on its broader mission to realign economy with ecology (see Chapter 3), predominantly through its agroforestry and reforestation plantations and the production of export commodities. Even when *insetting* is not feasible, for example with Accor Hotels who don't rely on commodity production to such a degree that they can offset within their own supply chain, projects are still linked to tree planting, normally combined with commodity crop production. In this sense, the logic behind *insetting* is still critical to Pur's marketing and, as such, success in selling higher value credits.

Pur's reforestation projects in Peru follow this model: generating carbon credits by planting trees – often on land designated as 'degraded' – either intercropped with export produce or in plantation systems, in various models designed by Pur (see Figure 4.2). As noted in the case of the *Alto Huayabamba* agroforestry project in Peru:

“The purpose of the project is to reforest degraded lands and lands cultivated with cocoa, in association with small-scale farmers, volunteer members of the ACOPAGRO cooperative, and to promote sustainable agriculture through agroforestry and sustainable forestry in the long term.” (Pur Projet 2011: 8)

Farmers are consulted on which model would best suit their land and production methods, and Pur prioritises the use of native trees ideally in a combination of slow, medium and fast-growth species to generate the maximum benefits, in terms of carbon, timber (when the trees have reached sufficient width to harvest) and wider services. For example, in the *Jubilacion Segura* project which Pur Projet runs in the Huayabamba Valley with their local partner, ACOPAGRO, plantations are designed with distances of 3m x 3m between trees, to ensure they are 'optimal for carbon', and to reach the minimum requirement to be considered 'forest' by the Peruvian state – A minimum area of 0.5 hectares; a minimum tree crown cover of 30%; and a minimum tree height of 5 meters – and thus be eligible for carbon credits as a reforestation activity. In Pur's description, ensuring that “the targeted plantation reaches the Peruvian definition of a forest, in terms of height, crown coverage and area” and that “the proposed activity is hence a reforestation activity, according to the Peruvian definition of a forest” (Pur Projet 2011: 22). The plantations are then maintained by the farmers, with branches trimmed off by chainsaw or loppers to ensure rapid and straight growth with competing shrubs, plants and weeds cleared from the area (a process that will be explored further in the following chapters).



**Figure 4.2** A selection of Pur Project's agroforestry models

The co-benefits of the reforestation projects are not just aimed at the client and their consumers, but the farmers involved through the various improvements they can expect to gain from agroforestry. As elaborated on by one Pur employee: “poverty reductions, resilience, adaptation to climate change [...] planting trees inside of farmers' fields is very, very useful for them”. The plantations are therefore designed to meet not just the needs of the market, but also to support the local farmers and complement the conservation work in the region – generating carbon credits while also benefiting small-scale producers through their potential value on timber markets and wider ecosystem and productivity benefits (which will be explored using the case of cacao in Chapter 5). This places farmers and trees at the heart of Pur's approach.

Reforestation is critical in this sense, not just to the narrative of the project – essential in selling the carbon credits – but also in its ability to deliver benefits within the valley. Thus, in the Huayabamba Valley, while reforestation and conservation are treated as separate projects administratively by Pur (each with different project leaders and reporting lines), together they represent a combined landscape approach to the area. The conservation project of Biocorredor Martin Sagrado “started as a complementary strategy to the ‘Alto Huayabamba’ community reforestation project” (Pur Project 2016c: 51) and both aspects are managed by the same NGO locally (FUNDAVI). This chapter will now move on to expand on the interplay between reforestation and conservation in how carbon is secured in the conservation work and the implications for the structure of the project.



## Finding Conservation Carbon

Reforestation holds another key benefit over conservation in offsetting projects: it is a simpler process of converting projects to credits and distributing that money. To quantify the additionality of reforestation, Pur is able to calculate an overall quantity of carbon that the project will sequester over its lifespan based on the number of trees to be planted – and a final figure of tCO<sub>2</sub>e that the project generates in emissions removals can be ascertained from this figure minus a survival rate from the plantations. Moreover, the contracts registered with Verra highlight how leakage does not need to be measured in these schemes. By restricting the focus of carbon onto the plantation, the argument can logically be made that the risk of leakage is zero. The reforestation plots contain their own plans for logging and as such the idea that it might spur more logging outside of the plot can be discounted, despite the equally logical argument that people could still expand illegally as they harvest in reforestation plots. The project is thus bounded and quantified in clear terms and farmers can decide whether they want to be part of these schemes and receive direct individual benefits. Privatising, measuring and sharing the benefits of carbon from a conservation project, in contrast, is complex. This section highlights this complexity through the privatisation of land and carbon in the Biocorredor Martin Sagrado REDD+ Project and the efforts required to measure and verify the carbon in the project.

While for the purposes of the carbon market a project developer must hold sole legal ownership rights to the carbon, the *land* on which the carbon will be sequestered can be secured by other means, whether through contracts with the state, private ownership, or as in the case here, via an agreement with third party organisations. As noted in the previous chapter, the Biocorredor Martin Sagrado REDD+ Project is actually composed of three conservation concessions, with each contract granting rights to the area for 40 years registered to a different local producer organisation. Only one of these concessions, however, was granted prior to Pur's arrival: The El Breo Conservation Concession.

The El Breo Conservation Concession is run by an association from the village of Dos de Mayo, the Association for the Protection of the Communal Forests of Dos de Mayo Alto Huayabamba, APROBOC. As told by one of APROBOC's founding members, the formalisation of conservation work in the area began in 2005-6 by a small group of farmers concerned about the fate of forests in the area. As noted by one founding member:

“In this era, we wanted the people that were logging here to leave. People were selecting certain trees at this time and creating a scarcity. Our objective was principally to stop the logging and to take advantage of the tourist attractions like El Breo. The waterfalls and the mountains. The waterfalls needed to be looked after. But there was no legal framework to care for it.”

In 2007, the first official meetings began to discuss this objective, with often just three or four people discussing how they could protect the local environment. This was formalised on 9 March 2007 into APROBOC, originally as a ‘committee for conservation’. During this period, APROBOC were advised by a local conservation organisation to register as an association and apply for a conservation concession<sup>35</sup>. In 2009, APROBOC signed a convention to form the first concession run by a local association in Peru<sup>36</sup> (alongside a smaller reserve in Picota) and in June 2010 – after a protracted wait thanks to the ongoing processes of decentralisation in Peru which saw responsibilities for concessions passed to new regional environmental bodies (see Shanee et al. 2020) – the regional government approved the concession, giving APROBOC a legal right to the land for 40 years.

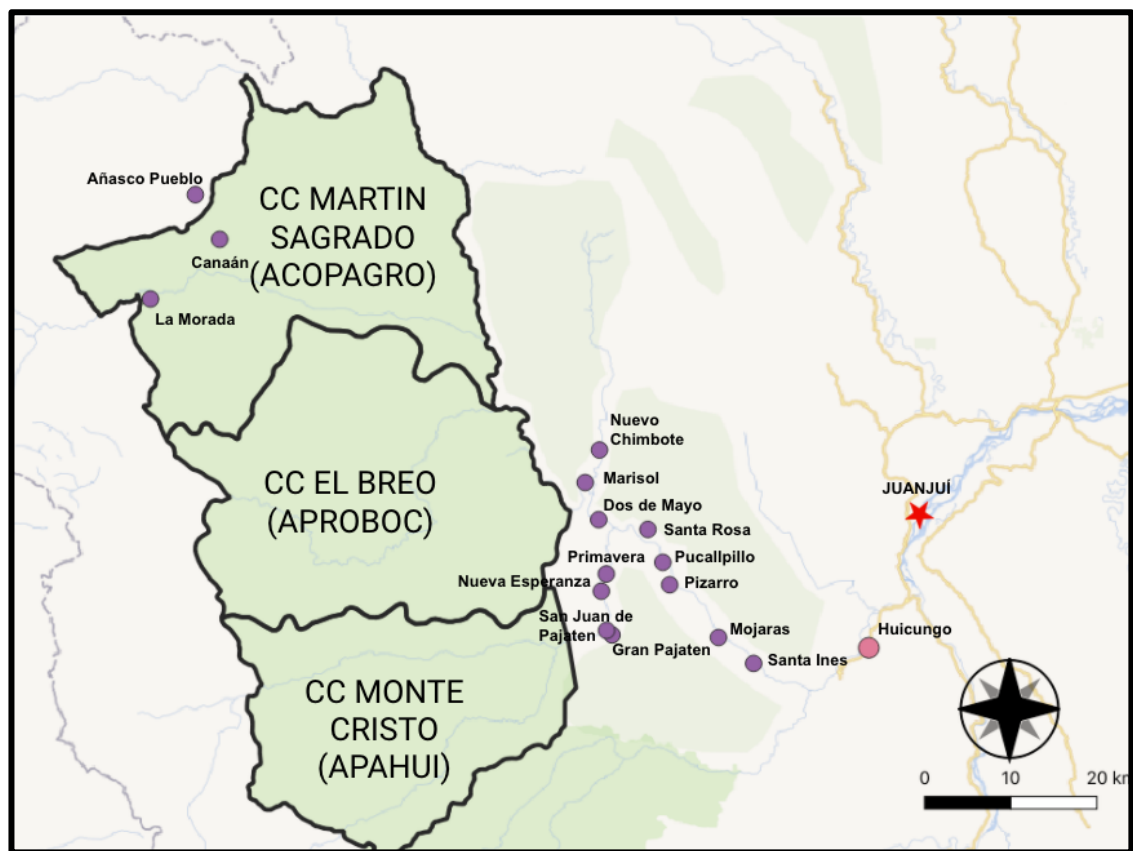
The small group of farmers who comprised APROBOC worked with a local conservation NGO to elaborate management plans detailing the goals and strategy for the concession. APROBOC received its first conservation funding of \$100,000 from the conservation NGO and built a control post to monitor activity at the border of the concession and equipped the association’s office in Dos de Mayo, as well as buying solar panels, a computer and a boat for patrols upriver. This left the newly formed APROBOC as a well-equipped initiative, but crucially without long-term funding to pay the forest guards who were working purely on a voluntary basis. At this time, one of the co-founders of Pur Projet was already working on reforestation projects in the area and looking for an opportunity to set up a REDD+ project. When the opportunity to support the El Breo Concession was introduced to them they met with the farmers of APROBOC and a deal was agreed to establish a REDD+ project.

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<sup>35</sup> A conservation concession was suggested over more formal ownership, such as a private protected area, for its relative ease of management, particularly given the scale of the area (103,800 hectares). The process of applying for a private protected area is far more stringent and one member of APROBOC explained that the state would be unlikely to grant ownership of such a large area of land to a *campesino* group with limited claim to it.

<sup>36</sup> At the time, only two other concessions existed – Alto Huayabamba and the Los Amigos concession in the southern state of Madre de Dios – both of which were managed by an established conservation NGO and connected to international fundraising bodies.

In September 2011 APROBOC signed a deal to transfer all the rights to the carbon in El Breo to Pur Projet, but according to one member to “create something large enough for REDD+”<sup>37</sup> Pur wanted to secure two further concessions covering the area from the borders of the Rio Abiseo National Park to the contested border between the regions of San Martín and Amazonas (see Figure 4.3). Concessions must be registered to official groups within Peru, rather than simply to communities (Shanee et al. 2020) and, as such – and in keeping with Pur’s focus on integrating projects within small-scale farming systems – the creation of the two new concessions was done through two local producer associations.



**Figure 4.3** Map of the project zone and the three concessions

The first of these associations was ACOPAGRO, a not-for-profit cacao cooperative and one of the largest cacao exporters in Peru, which applied for the northern concession of Martin Sagrado (somewhat confusingly taking the same name as the overall project). Dedicated to the ‘commercialisation, conservation, investigation and sustainable use of the natural resources of the Huallaga valley’, ACOPAGRO had a large network of farmers that it worked

<sup>37</sup> The reasons for this from Pur’s perspective – given that an area over 100,000 hectares is clearly sufficient for a REDD+ project – have never been elaborated to me despite it being raised multiple times.

with, largely in the lower part of the valley. The organisation had been working with Pur on the reforestation projects detailed above since 2008 and was a long-term partner of one of its co-founders, via their previous role procuring fair trade cacao for an organic chocolate company.

For the southern concession of Monte Cristo, Pur supported a newly formed cooperative (legally registered in 2011) for the trade of cacao, cattle and other crops, APAHUI. APAHUI was – and remains – administratively weak, but its location in one of the larger villages on the Huayabamba river, and ability to reach multiple communities, suggested it had the potential to scale and manage the project while increasing its influence amongst local producers.

The application for the new concessions involved consultations with local communities, precise area delimitation, and the writing, submitting and editing of technical proposals and management plans (work that the local conservation NGO assisted APROBOC with for the El Breo concession), which provide evidence to the regional government that concessions will be sufficiently supported to achieve their conservation goals.

As part of the application, Pur employed a local company to conduct ‘awareness raising’ workshops to establish free, prior and informed consent, and socio-economic studies to assist in the registering of the concessions, a process which in the northern concession has been heavily criticised for its lack of rigour (Cahuata and Angerand 2014). The application process was further complicated by the fact that, unlike APROBOC, the two other associations are not based in communities that live in or by the concessions they were applying for. ACOPAGRO’s head offices, for example, are based in Juanjuí, far from the northern borders of the concession and require a flight and multiple taxis or two day’s travel to even reach the towns which provide access to it – Leymebamba and Rodrigo de Mendoza<sup>38</sup> – which are in the neighbouring region of Amazonas. This geographical distance makes accessing the large communities living within the conservation zone difficult, given their already remote location and poor access routes.

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<sup>38</sup> In 2019, ACOPAGRO was attempting to move two employees to work full time from the town of Rodrigo de Mendoza, still two days travel to the nearest village within the concession.

Despite the challenges, both concessions were granted to the respective associations and, alongside APROBOC's concession, created the full 303,699 hectares Biocorredor Martin Sagrado REDD+ Project. With the legal right to the land privatised, the associations were able to sign contracts with Pur for the rights to the carbon. Contracts between Pur and the associations guarantee that, for the rights to the carbon, a minimum of 55% and up to 70% of the funds from the sale of the credits of each individual area is returned to the APROBOC, APAHUI and ACOPAGRO respectively, while Pur retain a minimum of 30%. This model of funding ensures that if Pur are able to secure a higher price for the carbon credits – as they did in the most recent sale of credits – all of the groups benefit. To take this carbon to market however, Pur still had to quantify the carbon in the project and have it verified and registered within a carbon certification scheme – moving from the *privatisation* of carbon to its *commodification*.

### **Measuring and verifying carbon**

A key part of the process of creating carbon as a commodity is assessing additionality; how much carbon the areas contain and how much would be lost via emissions from deforestation without the project. The Biocorredor Martin Sagrado REDD+ Project followed standard methodologies for forestry carbon projects, which use baseline rates of deforestation to measure the project's impact against. This process involves creating projections of future deforestation based on a combination of historical data and analysis of the local drivers of deforestation. After a project has been established this projection can then be used to estimate the deforestation (and emissions) avoided and thus prove additionality. The often questionable, if not spurious nature of baseline setting has been analysed elsewhere (Lohmann 2010), but regardless of the validity of its output, the degree of work involved (and expense) in justifying what would have been lost without intervention is undeniable, and important to the creation of the commodity, so I explore this here.

For a baseline to be set, the project area had to be clearly defined, with non-forested areas (that would thus not generate emissions reductions through carbon removal) removed, giving in this case 295,654 hectares (Pur Projet 2016a). Analysis of historical deforestation based on interpretation of satellite imagery showed that 75,042 hectares in the surrounding areas were deforested between 2001 to 2010, at an average annual rate of deforestation of 0.6% (*ibid.*: 47). Pur's analysis identified that the key driver of deforestation in the region was

the conversion of forests to cropland (accounting for 70% of deforestation, *ibid*) and this was used to predict the scenario of future deforestation, with the Project Design Document stating that:

“In the absence of the project it is likely that forest habitat in the project area will be reduced by 15% in the next 40 years through land clearing, illegal logging and slash and burn practices” (*ibid*: 84)

On this basis, a baseline rate of deforestation for 2010-2020 was set against which actual deforestation rates could be measured by project ‘verification’, that would eventually lead to credits being officially registered with the crediting certifier Verra. For example, from 2010-2015, 482 hectares were deforested in the project area, compared to 664 forecast in the baseline scenario. This gives a total of 182 hectares of avoided deforestation (*ibid*). These figures were verified, along with other claimed social benefits from the project by a third party (in this case the organic certifier Ecocert) and based on Pur’s calculations of carbon storage in the area, credits were granted for a total of 162,258 tCO<sub>2</sub>e for this time period (slightly under the predicted amount of emissions avoided). This figure was stressed to me by one of Pur’s project managers as being extremely cautious in its calculation, to ensure the project was not taking excessive funds by overestimating potential deforestation without the project.

This process was both extremely technically complex and enormously expensive. Third parties had to be paid to provide the estimates of carbon stocks and baselines of potential loss, and to this cost can be added the goodwill of a great deal of unaccounted for local labour. Carbon verification also required applications to Verra and The Climate, Community & Biodiversity Alliance and various private intermediaries were contracted to assist in this work, particularly where Pur lacked the internal expertise<sup>39</sup>. In total, \$224,920<sup>40</sup> (equivalent to 8% of project spend) was spent on certification costs between 2010-2015<sup>41</sup> – with this finance coming from overall project budgets after Pur’s profit had been deducted<sup>42</sup> – with

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<sup>39</sup> Including ONF International, a French firm “assisting in the baseline scenario modeling, satellite images interpretations, and maps of deforestation” (Pur Projet 2016a: 16), CREAR, for the socioeconomic studies and awareness raising work and third-party auditors, such as SCS Global Services and Ecocert to verify project benefits.

<sup>40</sup> Converted from €191,282

<sup>41</sup> There are other verification costs beyond this. Each of the management plans of the reserves require additional fees for certification or auditing, ACOPAGRO, for example, budgeted a further \$18,000 for an external consultant to conduct monitoring and evaluation work.

<sup>42</sup> These figures are from internal reports obtained by the author.

an estimated overall spend on verification of \$2.75 million in the first 40 years of the project (Pur Projet. 2012a). The cost and effort of verifying carbon has implications not only for who can establish these projects, but how money and time is spent in ongoing project management.

## Project Spend and Expansion

The expensive and complex process of registering carbon in a conservation project and the need to provide a suite of co-benefits that appeal to carbon credit buyers means that, despite impressive headline figures of money brought in from carbon credits, after all of the deductions and the requirements of the project, the annual funding can be underwhelming for the amount of land it covers and is meant to protect. As noted by one association member when discussing the cost of conservation work:

“If you divide [the cost of conservation] by hectare it's a tiny amount. If you look at the 300,000 has of the project, it's tiny. S./ 1,200,000 [\$335,105] that we have per year. It's nothing. It's S./ 4 [\$1] per hectare per year. It's cheap.”

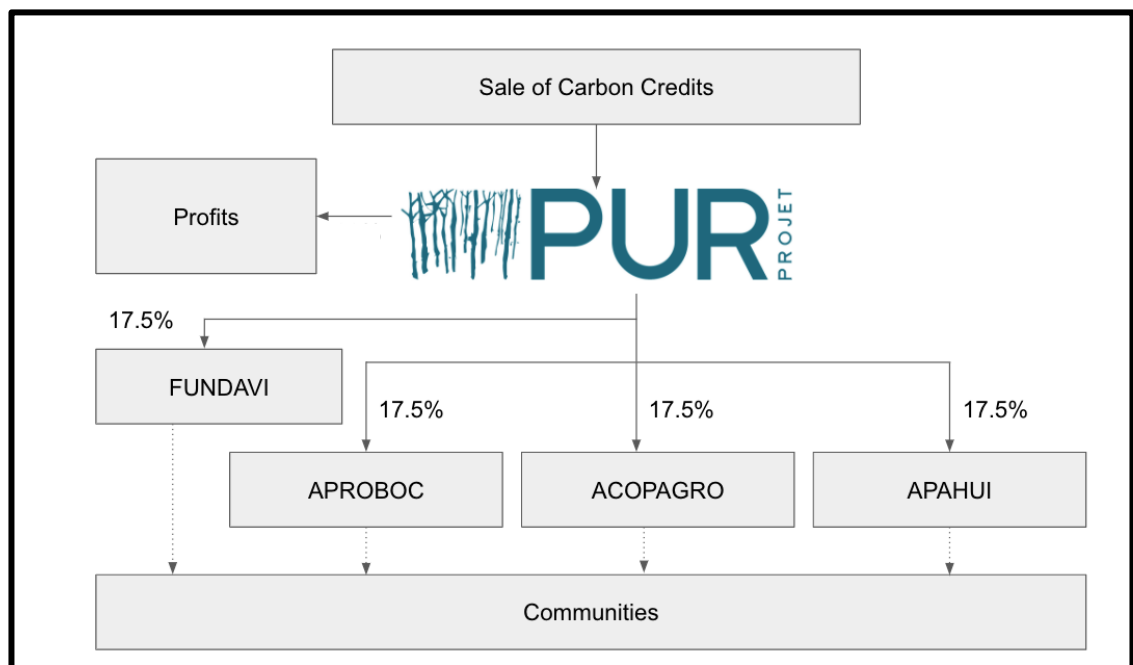
Thus, the head of The Biocorredor Martin Sagrado REDD+ Project (amongst others) explained to me that at current levels, REDD+ simply fails to deliver the funds needed to conduct the conservation work *and* deliver benefits to the communities. The seeming shortfall in funding is perhaps surprising, given the \$335,105 a year compares favourably with other conservation schemes in the areas. The adjacent Rio Abiseo National Park for example has half of this budget (\$167,553<sup>43</sup>) to cover an area of only slightly smaller size – 274,520 hectares. Understanding the seeming disconnect between high funding figures and on the ground requirements requires an analysis of funding distribution and project spend. This section examines what this means in practice, by explaining the funding flows in Biocorredor Martin Sagrado and how profits are shared in the project. It then expands on the place of reforestation considered above to show how the overall approach in the Huayabamba Valley relies on the synergy between the conservation and reforestation work to deliver benefits to the communities involved.

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<sup>43</sup> Converted from S/. 600,000

As noted above, the rights to each concession – and thus the benefits accrued to them – are held by local farmer associations or cooperatives. While project design documents stress the role of the project in supporting local communities, this is done *through* the producer associations, who hold their own budgets and a degree of autonomy in how this is spent. Each association has its own agenda and goals – from attracting new members, supporting their core crops and breaking into new markets – and in size alone they differ greatly – APROBOC has 23 members, APAHUI 120 and ACOPAGRO 1,600.

Pur Projet established a local NGO, FUNDAVI, in 2012 to manage the funding inflows and the project administration, and to allow some standardisation of project goals. While it may appear that this would take more money from the project, FUNDAVI, as a foundation, is tax exempt. By paying for the intermediary body the project saves money and gains the additional management benefits of a local organisation. As stated by one informant from APROBOC, “in the end, we pay 20% to FUNDAVI, but the state would take 19%”. Funds are then, ideally, split equally between the four organisations (see Figure 4.4), although there is some flexibility in the budgets thanks to the varying goals and responsibilities of the groups<sup>44</sup>. As one association leader explained this was difficult to understand at times and makes tracing the money in official documentation beyond Pur challenging.



**Figure 4.4:** Simple model of project funding flows

<sup>44</sup> APROBOC, for example, received \$404,590 (converted from €343,919) overall between 2010-2015, which represents just 15% of the sale of carbon credits. By Pur’s analysis, APROBOC received 23% of project funding in this time (Pur Projet 2015) after their share of the credits were deducted, reflecting the additional verification and third-party costs.



Having FUNDAVI operating locally allows Pur to have some oversight on goals, and associated reporting structured over eight priority areas (see Table 4.1). While priorities and spending change each year, a typical budget will show how spending breaks down across these categories. Local financial reporting (see Table 4.2, these figures refer to FUNDAVI's distribution of funds for the project and, as such, exclude Pur's profits and the certification costs), shows that for 2017 'expansion, training and empowerment of communities' was the largest category for project spend, covering almost 40% of its budget. This refers in part to a large campaign to register farmers' land in 40-year leases, the promotion of new agroforestry projects and to working with local communities on the registering of new concessions adjacent to Biocorredor Martin Sagrado. Two other categories – control and surveillance and awareness raising and communication – combine with this to make up almost 85% of the overall annual spend.

**Table 4.1** Categories of project goals

1. **Legal:** Formalising project, plans organisations and land rights (mainly through conservation concessions and 40-year leases for crop production)
2. **Control and surveillance:** Patrols, wages of forest guards and signage and infrastructure to limit incursions into the conservation concessions
3. **Awareness raising and communication:** Workshops, meetings, events and signage to promote the project and its core messages
4. **Non-timber forest valuation:** Extraction of forest products such as seeds or medicinal plants and the development of ecotourism
5. **Scientific and inventory:** Inventories of biodiversity and carbon stocks
6. **Renewable Energy:** The development and distribution of renewable energy and equipment to lower use of fuelwood
7. **Reforestation:** Agroforestry programs, as described above
8. **Expansion, training and empowerment of communities:** Expansion of work through meetings and new project design and implementation. Strengthening of local organisations.

These different categories of cost obscure where money in the project is actually spent. For example, it is unclear whether the control and surveillance category includes the salaries of the heads of conservation (of which there are three, one for each concession), who spend time on various administrative tasks, rather than strictly on control and surveillance. Many of the meetings, training sessions and administrative work in the project focused predominantly on the creation of new areas, the registering of farming land and raising

awareness of the logic of REDD+ and reforestation work. The administrative element of the work is a major drain on resources, with one project worker memorably referring to the many meetings and management requirements as ‘dead time’ (a theme that will be returned to throughout this thesis). This has caused great frustration for some and one leader of FUNDAVI emphatically criticised this emphasis on coordination over delivery: “everyone who comes here does so to 'coordinate'. Coordinate? That word is just rubbish to me” (*“es una porqueria”*).

**Table 4.2** Biocorredor Martin Sagrado Project spend 2017

Component	Annual Spend (S/.)	Percentage of Budget
Legal	48,723	3.57
Control and surveillance	360,158	26.41
Awareness raising and communication	267,670	19.63
Non-timber forest valuation	35,232	2.58
Scientific and inventory	14,616	1.07
Renewable Energy	0	0
Reforestation	11,500	0.84
Expansion, training and empowerment of communities	527,967	38.72
Management costs	97,732	7.17

The reporting and classifying of activity is also down to the decisions of the individual concession holders. For example, in the category of awareness raising and communication – one of the larger cost centres which is supposed to be focused on training sessions in local villages and inspiration for local school children – ACOPAGRO in 2017 spent most of its money on marketing costs (FUNDAVI 2018). This may be a justifiable spend, but it is also self-serving, as it promotes the cooperative’s wider work growing cacao in the region, rather than the project. It included, for example, paying for attendance and marketing at a local conference, ExpoAmazonica (an event that will be detailed further in Chapter 7), where its stand focused on the promotion of their cacao work almost exclusively.

## **Making up for shortfalls**

The diverse and expansive goals and spending account for the sense amongst leaders that the funding is not able to cover the core elements of the work. For example, overall for the period 2011-2015, just 15% of total funds went towards control and surveillance (Pur Projet 2015), impacting the quality and quantity of monitoring and patrols of the core conservation area (something that will be explored in greater detail in Chapter 6). APROBOC, which takes the lead on much of the patrolling and monitoring work in the reserve, for example, has budgeted an average of \$172,273<sup>45</sup> a year for its conservation work alone, far above current funds received (comparing to the overall budget for the work noted above of around \$110,000 a year). However, it also makes it more difficult for individuals and communities to see the multiple supposed benefits of the project, with more time and effort dedicated to running and expanding the project, than generating notable public benefits.

For both of these reasons, the project relies on a wider distribution of income and benefits from across the other work in the valley and, critically, the wider reforestation work administered by FUNDAVI. Through the relationship between project funding and benefits, reforestation – and crucially expansion – have become necessary to project success. New projects and reforestation make up the shortfall in direct benefits from the conservation work, while they in turn aim to ease pressure on the further encroachment of local communities into the forests.

In comparison to the management, control and vigilance needed for Biocorredor Martin Sagrado, reforestation represents a great deal less daily management for FUNDAVI and a more promising avenue to engage more farmers and expand the impact of the project. As one FUNDAVI worker explained to me, where other initiatives faced a degree of push back from local communities (to be explored in Chapter 6), the number of trees planted could increase every year, with 45,000 trees planted in year one, to 60,000 in year two, to 70,000 in year three, until 100,000 a year are being planted. After the initial set-up visit and health check-up of the trees after a year, the farmers are largely left to manage their stock of trees by themselves. Although this has led to some plots being abandoned after a few years, the

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<sup>45</sup> Converted from S/. 616,900

whole existing supply of reforestation plots in the valley are administered by just one (very overworked) employee and occasionally one extra assistant<sup>46</sup>.

The success of the reforestation work was reflected in many conversations I had with farmers in the Huayabamba Valley, who were rarely able to identify any benefits from Pur Projet, but, as will be explored further in Chapter 5, spoke enthusiastically about the potential for the timber industry and reforestation in the valley. The socionatural landscapes that this focus on agroforestry and reforestation produces will be a focus for the remainder of this research, but before moving onto these issues, I will now briefly summarise the key arguments identified here relating to the role and impacts of narratives in generating and sharing value on the voluntary carbon market.

## **The Production of Surplus Value on Carbon Markets**

The ownership structure and the diversity of aims and approaches of the different groups involved in the Biocorredor Martín Sagrado REDD+ project explored above have implications for how access, assets and profits from carbon are centralised. This section will explore these through an analysis of how surplus value is created and shared within the project – and more broadly in voluntary carbon markets in general.

### **Privatisation**

While the processes by which money is invested in the conservation concessions seems at first glance like a standard case of accumulation by dispossession (per Harvey 2003) – an asset is privatised from the commons and then captured by specific actors who centralise similar assets – many of the structures created here are novel. While selling on the voluntary markets requires strict private property rights to the carbon, the land can be obtained by other means. In San Martín, property rights to the land have been established, *but* under strict conditions of management in a 40-year contract. Furthermore, they have been granted to local associations, not directly to Pur.

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<sup>46</sup> This is an exceptionally small team for the work. Another of Pur's reforestation partners has seven workers in their reforestation team covering a similar area of work and as explained to me by one manager this team was still stretched.

In Marx's terms, rather than direct commodity exchange or the purchase or dispossession of a raw commodity to be manufactured, Pur is instead generating value and surplus value from a form of monopoly rent (see also Andreucci et al. 2017). It is doing so, however, through an active process of production. Only through the baseline-setting, validation and verification processes outlined above, was Pur able to take the credits to market, not to mention their ability to find buyers and package these credits up as distinctive, with proven co-benefits. This involved working with multiple groups, a huge number of management plans and work with intermediaries to qualify for certification.

The excessive start-up costs involved in this work all but excludes small scale projects from the voluntary market without support. Pur was able to fund this substantial outlay upfront, by selling 'pre-verified' credits and in 2012, "most of the activities to date" had been "funded through the sales of pre-certified [Verified Carbon Units] or environmental services" (Pur Projet 2012b: 5). The ability to raise funds before the carbon had been secured or measured allowed for the upfront investment in the project that could be distributed to the associations and various middlemen. This highlights Pur's role in accessing funds that APROBOC alone, for example, had no chance of securing. Indeed, these deals largely followed the guidelines for establishing a voluntary carbon market project – plans were registered, certified and carbon credits claimed – but the complexity of this process shows how important Pur's support was, and how smaller groups would be less able to privatise and exploit carbon.

Rather than a strict dispossession, there is, then, a reciprocal relationship between local groups and global actors able to access markets and finance. Without Pur, the community are unable to extract the value from the forest that they have secured, and Pur must work with local groups both to secure the land in concessions and to secure the premium level of payments through promises of local empowerment.

### **The role of narratives**

Beyond the questions of access that the REDD+ structures raise is an insight here into the method of surplus value generation at the heart of voluntary carbon markets. Despite efforts to make them commensurable and interchangeable, carbon credits are not sold in the voluntary market abstracted from the projects that produce them. Far from their origin being fetishised to obscure their specificity (cf Paterson and Stripple 2012, see also Lohmann 2010),

they are sold to companies on the basis of the story behind the project and trust in the developer. As noted in this chapter, Pur must seek out voluntary market buyers, actively pitching to clients about their expertise and the suitability of the project for the client. As such, an important part of its team is the sales staff who work with companies to design carbon portfolios that will most benefit them. Creating a narrative that emphasises co-benefits and having a global network of business connections, becomes important to the functioning of the project.

It is thanks to this work – and the elite business connections that Pur has access to – that the project has been able to sell credits for over \$10/tCO<sub>2</sub>e, well above the global average and in stark contrast to another similar project in San Martín which sells credits for \$1-2/tCO<sub>2</sub>e. The power to generate *surplus* value, therefore, lies in the ability to generate, manage and sell this narrative and to invest in the outsourced certification and technical processes, rather than the land or carbon itself.

An analysis of the voluntary markets which places an emphasis on how it generates surplus value thus connects the literature on the production of carbon (Bumpus and Liverman 2008, Carton and Andersson 2017) with theorists exploring the dynamic of ‘enrichment’ in other sectors of the global economy (Boltanski and Esquerre 2016). As elaborated by Fraser, (2017: 61): “consisting largely in narrative, the ‘work of enrichment’ involves recounting a past that endows the object in question with historical significance – hence, with particularity, originality, uncommonness, and distinctive provenance”. The ability to ‘enrich’ assets with these narratives exacerbates issues of access thanks to the differentiated ability of groups to “circulate in the complex universe of the commodity” (Chiapello in Boltanski and Chiapello 2018: 16). This privileges those actors that are able to profit from what Wark (2017: 317) describes as “*asymmetrical flows of information*”; the advantages that they hold in competitive marketing and global connections, in this case, to raise funds for the project.

Paying attention to how ‘enrichment’ functions provides insights into the differentiated ability of these groups to generate profits. This can be seen most starkly in the contrast between the rapid growth of Pur and the struggles of the various associations. While Pur is ‘not for profit maximization’ (see Chapter 1), it is now developing projects based on its agroforestry and carbon-sequestration model in 40 countries, with the European arm of its

business alone having a turnover of \$4,494,608 in 2017, up 35% from 2016<sup>47</sup>. With regards to Biocorredor Martin Sagrado, based on the baseline setting process outlined above Pur has estimated the removal of 8,789,000 tCO<sub>2</sub>e over the 40-year crediting period, which has an enormous potential value. Indeed, should the price of carbon rise to current calls of a minimum price of \$30 (Edenhofer and Rockström 2018), this would be \$263.7 million. While Pur has contracts in place to share any such large rise in value, there is little to stop other groups acquiring carbon in a less equitable manner.

### **Impact on funding**

The role of *‘enrichment’* in the voluntary carbon markets and what this can tell us about how exploitation manifests in projects will be returned to in the conclusion of this thesis, but for the purposes of the chapters that follow this chapter has shown the role that narratives have in dictating the goals and form of the project. In the Biocorredor Martin Sagrado REDD+ Project, landscapes, products and people are all imbued with narratives to make them more saleable, and the focus on agroforestry, trees and commodity crop production is central to its success.

The narrative that Pur sells to its clients is built around ‘insetting’ and rhetoric that focuses on transformation of existing extractive models and redistribution to small scale farmers. That private ownership and commodity production is at the core of the project has created distinct outcomes for how financial flows, and benefits, are spread across the project. In the Biocorredor Martin Sagrado REDD+ Project, Pur thus relies on producer associations to be genuinely representative and a conduit for local benefits. Despite their designation as ‘local’, however, these groups are not necessarily representative and, in some cases, represent a tiny portion of the population who have been able to secure a vast amount of land and the rights to sell the potential profits (as with the 22 farmers of APROBOC).

Thanks in part to the need to deliver on the narrative of farmer empowerment, the project suffers from a shortfall in budget and struggles to deliver notable benefits to communities. As Pur would no doubt note, there are multiple community benefits from their work –

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<sup>47</sup> Converted from €3,809,700. Global figures for Pur are hard to ascertain as the current structure comprises four entities, including a holding structure based in Singapore which doesn’t release financial information. To give a sense of scale, in March 2016 Pur stated that revenues processed through the European part of the business equalled 65% of the business total and, as such, the figures above can be expected to be much higher for the global group.

through personal gains in employment and in the stimulation of local markets – but actual money and quantifiable benefits are directed at specific individuals rather than via public goods – predominantly via reforestation projects, employment, or alternative livelihood projects. Therefore, in lieu of these public goods, it instead relies ever more on supporting commodity crops and reforestation to deliver benefits, needing to expand this work to ensure more benefits will flow to individuals involved. The socionatural landscapes and forests that this narrative creates are the subject of the next two chapters.

## Conclusion

This chapter has introduced how Pur Projet and the associations they work with have connected farmers, trees and carbon, and supported them through selling carbon credits on the voluntary markets. Following the journey of carbon as a commodity, though, highlights some of the complexities surrounding its privatisation and the transfer of benefits from global schemes to local communities. In Peru, this has been facilitated by new laws and regulations to allow legal ownership of land on terms that permit both rights to conservation and inalienable rights to the abstract commodity of potential carbon emitted. Through these structures, access, assets and profits are centralised, and NGOs, companies and wealthy individuals – regardless of motivation – have the ability to amass vast fields of monopoly rent.

Despite conflicting narratives of community benefits or local dispossession, the reality of the production of carbon as a commodity in the Huayabamba Valley highlights the diversity of strategies, discourses and contacts that have been mobilised to conserve land and monetise trees and forest landscapes. Rather than suggesting a site-based specificity to all voluntary carbon projects, this chapter has proposed certain commonalities and general rules that stem from the ownership structures and finance flows required to take carbon to market.

Financial structures are set favouring strict property rights and ensuring the path of least resistance for capital. This structure means that certain groups are far better placed to secure the rights to carbon and exploit them. In Biocorredor Martin Sagrado, Pur was able to not only fund the project at a speculative point, but also to secure funding from companies in advance of the costly certification process taking place. As such, the way offset mechanisms are structured, the barriers to entry and the asymmetrical flows of information involved in



defining and creating value, favour internationally mobile, well-connected actors, over small communities.

While Pur has designed schemes to provide the most benefit to these local communities, the structure of the project means that these are delivered via producer associations and, as such, have a reliance on individual, extrinsic motivations. The combination of a focus on individual benefits and a broad suite of goals to achieve ('co-benefits') has, in turn, led to a shortfall in funding for the conservation work with which to deliver on its bold plans for local development, one that has been compensated for with an increasing focus on project expansion and, in particular reforestation projects. The combination of small-scale producers, global commodity chains and conservation forms the basis of Pur's offer to the market, creating a narrative that appeals to clients, but perhaps, and as will be shown, fits awkwardly with its longer-term conservation work. Furthermore, the process of enrichment by which this narrative creates surplus value has specific implications for who is able to make profit within these schemes and how we can understand exploitation within 'ethical' commodity chains.

The themes explored here will be returned throughout the thesis, specifically regarding the form of privatisation now witnessed in the world of conservation and – following the evidence presented in the pages below – why this matters. The next chapters now move on to the geographical and ethnographic evidence which will look at how this vision of the natural world not only plays an important role in selling carbon, but manifests itself in the landscape. It does so in Chapter 5, through a detailed description of the cacao agroforestry plots that the project promotes.

## Chapter Five: Green Infrastructure – The Productive Regime of Conservation in San Martín

*“En sus bosques se siembra un jardín”* – In your forests a garden is planted.

National Hymn of San Martín

Chapter 4 introduced Pur Projet and the role of carbon markets in dictating the model of conservation and development that it promotes. This chapter will take Pur’s approach to conservation projects further to explore how its work has integrated into a specific locality and landscape. In doing so, it examines the changing role of commodity crops in the projects and their reframing as central to the narrative of environmental repair, analysing how history is being created and obscured in redefining the forests of San Martín.

Neil Smith (1990: 86) has argued that: “It is not merely that different production processes have different ‘space requirements’; rather, in the process of building productive forces into the environment, space is produced according to the spatial properties of this set of productive forces”. This chapter will begin to detail the ‘productive forces’ associated with conservation – combining commodity crops, reforestation and carbon-credit-generating protected areas – and how it has shaped the landscape and the landscape of power, access and productivity in the Huayabamba Valley and across the region of San Martín. Resting on the idea of ‘land-sparing’ this productive regime pushes a radical separation of protected areas and productive land, asking nature to work harder on the frontiers

Since 2008, the regional government of San Martín has pioneered a new vision of Amazonian conservation and development dubbed “Production, Protection and Inclusion<sup>48</sup>”. This model combines protected areas (both public and private), reforestation and the intensification of commodity-crop production to optimise the region’s geography for economic and environmental targets. In recent years, the Production, Protection and Inclusion paradigm has evolved in tandem (and in articulation) with Pur’s work in the Huayabamba Valley, with the success of the Biocorredor Martín Sagrado and the emerging timber trade increasingly reflected in landscapes and discourse as it expands across the region.

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<sup>48</sup> *Producción, Protección e Inclusión* in Spanish.

This chapter examines how the most important crop in the valley – cacao – has become central to conservation work via the logic of reforestation and agroforestry. Cacao has taken on something of a surreal quality in San Martín. It is a crop that promises everything – from leading the fight against drugs and terrorism to supporting conservation, and from driving economic development to being at the forefront of a gastronomic revolution – which is perhaps surprising for a commodity crop that is a known driver of deforestation in the neotropics (Pendrill et al. 2019). For Pur Projet, the “sustainable intensification” of cacao is one of the core goals of its REDD+ project (Pur Projet 2016a: 31) and its support and expansion is a critical part of conservation work in the valley. Cacao was part of the original justification for the REDD+ project, it remains the main business of Pur’s local partners and it is the focus of much ongoing work across its projects.

As will become clear, however, the focus on commodity crop production risks locking in a specific development pathway for local communities and repeating the same failures of agroindustrial approaches elsewhere in the world (see Oliveira and Hecht 2016, Nelson and Phillips 2017). Despite the integration of environmental goals, Pur’s work and the Production, Protection, Inclusion model of San Martín rely on a production of nature which insists on ever more intensification. The evidence presented below will use the example of the economic and ecological instability of the cacao sector to highlight how approaches pushing ever tighter links to global markets risk entrenching these inequalities and instabilities.

The chapter proceeds as follows. The first section traces the history and growth of cacao in San Martín and how Pur’s work in the Huayabamba valley integrated into and spurred it within the Production, Protection and Inclusion approach. This is followed by a closer analysis of the cacao sector in the valley and the ecological and economic issues that Pur aimed to counter. Pur’s approach will then be explored to assess whether they risk reinforcing a logic of commodity crop production and entrenching the very problems that helped, in part, to cause them. It will then discuss the potential implications of this specific production of nature and ask what type of development it offers to local populations.

## The Productive Regime of Conservation in San Martín

The ‘Production, Protection and Inclusion’ paradigm emerged in the San Martín region of Peru from around 2008 and was the driving force behind much of the strategy with regards to regional planning during the fieldwork period within which this research was conducted. While ‘inclusion’ was later to be added to highlight the participatory efforts to include communities in the decisions being made, the core of the argument behind the production protection model is geographical – the zoning of land to maximise production and efficiency. It is assumed that local farming communities will have the tools and support to produce sufficient crops intensified on their current land, without needing to expand or claim new areas to farm from the region’s forests, thus stemming deforestation. Put more simply by a representative of the regional government: “we realised that we can't protect, without producing. We can't ensure the protection [of forests], without ensuring the production [of crops].”

The strategy of using increased commodity production to avoid the conversion of areas of conservation forest to agricultural land has been termed ‘land-sparing’. As elaborated by Oliveira and Hecht (2016: 269):

“The idea originally advanced by Borlaug (even described as the ‘Borlaug hypothesis’) proposes that increased productivity will satisfy crop demands without extending production area, allowing other areas to be set aside for ‘strong’ conservation”, largely protected from all human use”.

This idea that technological improvements and productivity in agriculture will reduce deforestation is now so commonplace in conservation circles as to have become conventional wisdom (Angelsen and Kaimowitz 2000, Perfecto and Vandermeer 2010).

San Martín takes a region-wide approach to planning and mapping areas suitable not just for a binary of protection or non-protection, but to take into account suitability for agroforestry, reforestation and recuperation alongside more heavily restricted zones and larger-scale production. The ‘zonification’ process began in 2007 and currently sets aside 64.95% of land for conservation, 20.43% for recuperation, 14.41% for production, 0.07% for special treatment and 0.15% for urban areas (Figure 5.1, GORESAM 2018: 4). Combined with a

regional government which had a focus on bold conservation targets (Shanee et al. 2020), the zonification process galvanised a great deal of concrete action, increasing both productive activity and the number of protected areas.

The zoning policy came during an era of rapid growth in agriculture. Between 2001-2009 the agricultural sector in San Martín grew by 80%. In comparison, other regions with similar characteristics grew at just 8% (Huanuco), 9% (Pasco), 15% (Junin) and 36% (Cajamarca) in the same time frame (UNODC 2011). This expansion is also reflected in the increasing amount of land dedicated to agricultural production, which grew from 252,000 Ha in 2001 to 445,000 in 2010, an annual growth rate of 6.5%, which represented the highest in the country and saw San Martín become the leading producer of the country's oil palm (79% of national production), cacao (33%) and rice (19%) (*ibid*). The increased agricultural production also generated substantial benefits, reducing poverty in San Martín from 70% of the population in 2001 to 31% in 2010 (*ibid*). The expansion of agriculture is visually noticeable in San Martín, particularly with cacao, which unlike oil palm is often grown in a patchwork of small-scale producers rather than in industrial plantations. Any journey through the region is thus backdropped by vast plots and identical neat rows of cacao trees snaking down valleys, up mountains and lining major roads.

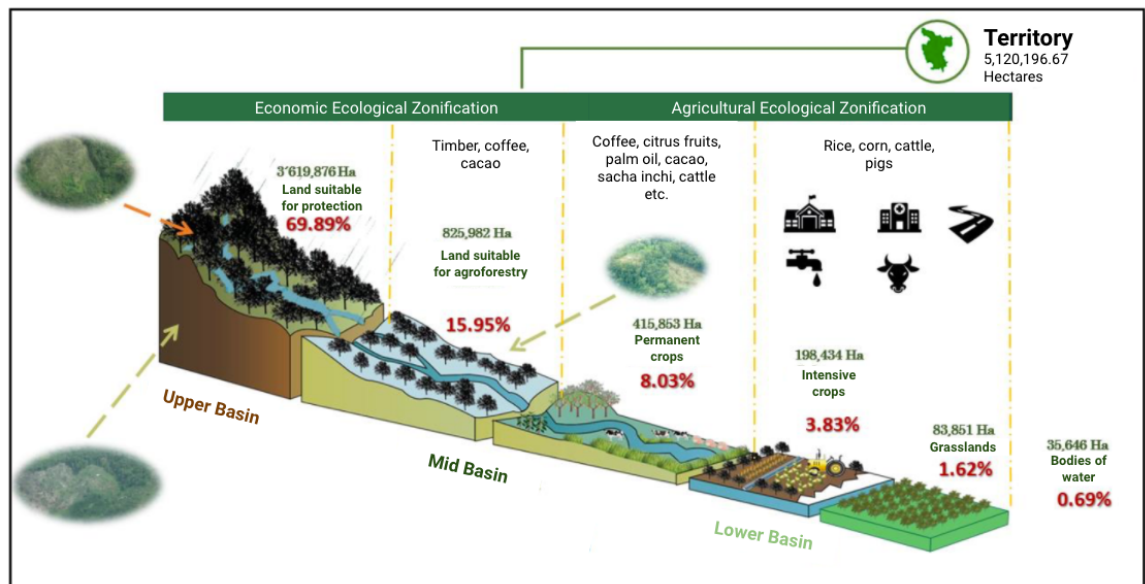


Figure 5.1 Diagram of zonification zones (Source: GORESAM)

Alongside the agricultural boom, protected areas in the region have also grown at a rapid pace. Until 2001 San Martín had just two official protected areas<sup>49</sup>, the Rio Abiseo National Park, founded in 1983, and the Alto Mayo Protected Forest, founded in 1987, covering a combined 449,205 hectares<sup>50</sup>. In 2006, however, the new regional government of San Martín committed to increase protected areas in the region, with a target of over half a million additional hectares by 2015 (Shanee 2012). The process of securing full rights to land from the state, in the form of a national park or a private protected area, can be protracted and technically complex, so the regional government took advantage of new powers for registering regional conservation areas and conservation concessions, sparking a wave of newly created protected areas (Shanee et al. 2020).

In 2007 the first conservation concession, Alto Huayabamba, was created covering 143,928 hectares and since then a further 38 conservation concessions have been registered by the regional government, with 15 further proposals pending, more than any other state in both number and area. These include the El Breo concession, which was one of the first applied for and the other concessions within Pur's remit. In total, concessions cover 606,552 hectares of the region, rising to a total of 659,200 hectares when private conservation areas and ecotourism concessions are included, putting 12.9% of the region's total area, under non-governmental conservation management<sup>51</sup> (Shanee et al. 2020). These areas have been supplemented with additional public conservation areas, giving a total of 1.95 million hectares protected in the region, not including the numerous buffer zones.

The mapping process above also has the, not unplanned, outcome of making land legible to, and investible for, private companies. As one member of the regional government explained, the zonification gives visibility and security to foreign companies looking to invest in the region. Alongside the potential earnings from agriculture and carbon credits in protected areas, the mapping process also identifies land 'suitable for reforestation' (see Figure 5.2). Forestry is a key focus of private involvement with the state with many buffer zones and

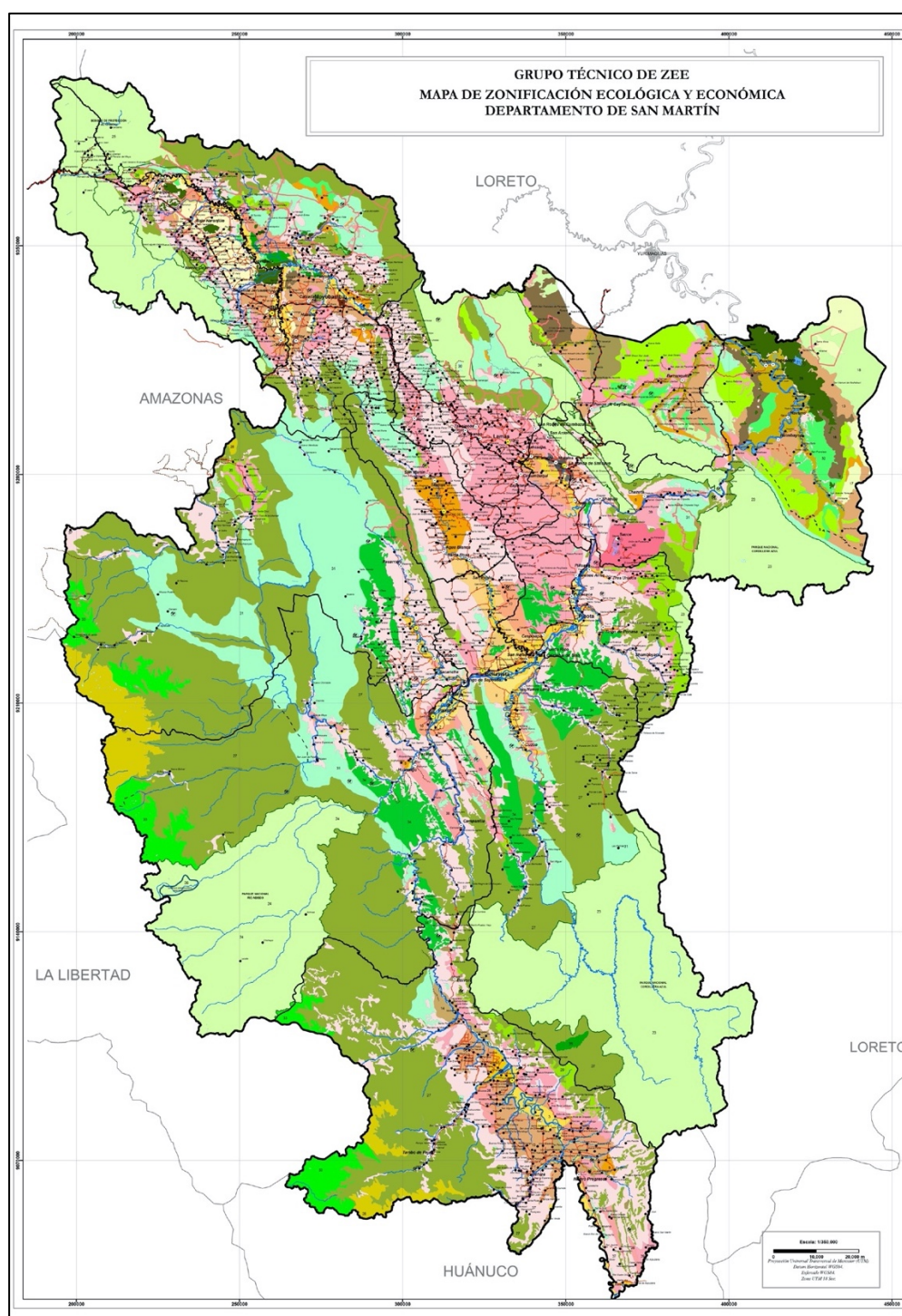
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<sup>49</sup> There were, of course, many formal and informal areas of protection, including the whole area encompassing Rio Abiseo and the Biocorredor Martín Sagrado within the Mariscal Caceres National Forest, but under current legal definitions.

<sup>50</sup> Other notable additions to official protected areas prior to 2006 were the trans-regional Cordillera Azul National Park created in 2001, with 502,032 hectares falling within San Martín and the first Regional Conservation Area, Cordillera Escalera, created in 2005 covering 149,870 hectares.

<sup>51</sup> Notably, this figure does not count indigenous areas, which are considered quite separately to public/private PAs (see Shanee et al. 2020) or areas under co-management between the state and NGOs, which is particularly the case with the Cordillera Escalera Regional Conservation Area and the Alto Mayo Protected Forest.

wider areas planning large plantations. From 2013-2018 441 certificates for forest plantations<sup>52</sup> were authorised with an area of 1,758.04 hectares<sup>53</sup> and multiple groups – within the regional government, local businesses and local farmers – spoke of plans to expand this.



**Figure 5.2** San Martín's economic ecological zonification (ZEE) (see Appendix II for full ZEE with legend)

<sup>52</sup> The specific form of reforestation, productive rather than recuperative, is explored over the next two chapters.

<sup>53</sup> Regional Government Presentation: 01/06/2018. This presentation also highlighted the potential profits of these schemes.

The rapid formation of parks and protected areas reflects a broader ‘race for territory’ in Peru, which, while normally considered between conservation and extractives (Bury and Norris 2013, Weisse and Naughton-Treves 2016), here was administered by a regional government keen to match bold conservation targets with bolder agricultural production goals. The rapid pace of this process was mentioned to me on numerous occasions. One conservation worker who was working in San Martín at the time spoke of the huge push from public officials to register as many conservation concessions as possible, with adverts on local radio and a promise of sometimes vast potential profits for those that managed to secure land.

Pur Projet’s approach to conservation and development is well-suited to this zonification programme, offering income from protected areas, reforestation and a focus on increased productivity of key crops (as detailed in Chapter 4). Critically, however, it also provided a way to continue increasing production through intensification. The land-sparing logic that combines protected areas with increased agricultural production explained above was just emerging in the San Martín region when Pur were looking to establish their first reforestation and conservation project – and the two have developed in tandem since.

The Huayabamba Valley offered Pur not only a receptive local government keen to develop conservation initiatives, but also an opportunity to work with small scale producers on export-focused commodity production, which was essential to their *insetting* approach. The cacao fields in the valley could be combined with ambitious replanting schemes to support the cacao sector while also selling carbon credits and building a timber industry – and this increased productivity and diversified markets would ease pressure on the areas of strict conservation in what was to be formed as Biocorredor Martín Sagrado.

The synergy in approaches can be seen in the shared logic behind using production to fund and facilitate conservation work. It was reiterated by one of Pur’s employees as being central to Pur’s overall strategy of balancing economy and ecology in their projects. Simply asking people to care for the environment was not enough, conservation required a strong productive sector: “yeah, [the] environment is great, but [...] you protect the environment through working with the productive sector, and working with people, working on social aspects.”



The Production, Protection and Inclusion model has generated impressive statistics – with production figures, numbers of hectares protected and reforestation all growing significantly and deforestation decreasing since Pur’s arrival in the region and the start of the zonification process. This is a story that has been taken up internationally, with groups such as The Sustainable Trade Initiative<sup>54</sup> and consortiums of development and conservation NGOs (Szott et al. 2017) promoting the ‘PPI approach’ or the ‘production-protection compact’ worldwide. It has even allowed the regional government to build a brand to certify and market its products as sustainable, fair and rainforest-friendly, explored further in Chapter 7.

The success of the project and the shared endeavour between the regional government and Pur’s model of agroforestry, carbon credits and reforestation has helped to promote, even supercharge, the land-sparing model on a regional level. This has led to increasing ties between the goals of the state and the project, with each adding to the ambition of the other. As noted by Pur’s local partner: “[we] plan to expand the agricultural and cacao border of the Huayabamba sub-basin, today it is a pilot, in the future it is expected to reach more communities and hectares; with this we insert ourselves in the food security policy promoted by the state” (FUNDAVI 2018: 4).

Encapsulating these goals, the Gran Pajaten Biosphere Reserve<sup>55</sup> – which covers over 2.5 million hectares of land encompassing both the Rio Abiseo National Park and Biocorredor San Martín among other protected areas – has placed the Production, Protection and Inclusion paradigm at the heart of regional space. Increased production is targeted through agroforestry and sustainable intensification, offsetting the protection of no use zones, and with everything mapped and optimised for its maximum potential and lines of use and protection, rights and restrictions drawn over the numerous communities that live within the area. It is also the crowning achievement of Pur’s local implementation partner, FUNDAVI, whose team was instrumental in applying for and securing the designation<sup>56</sup> as it encompasses much of the Pur Projet work in the Huayabamba valley.

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<sup>54</sup> See <https://www.idhsustainabletrade.com/landscapes/> [Accessed 28 August 2019].

<sup>55</sup> Stemming from UNESCO’s ‘Man and the biosphere’ programme, Biosphere Reserves were established to be areas of integrated biodiversity conservation and local community development. It is a very specific form of protected area, requiring the strict delineation of areas with a core area(s) with strict rules for protection, a surrounding buffer zone which is to be used for ‘sustainable activities’ and a transition area where a greater degree of economic activity is permitted.

<sup>56</sup> One staff member told me that they had all but written the application single-handedly.

While statistics and reports hail the impact of the approach, however, there are signs that the natural world is not reacting as expected and the financial benefits may be failing to reach those that it is designed to help. This chapter and the next analyse these impacts and the socionatural landscapes produced by zonification. Where Chapter 6 will examine how this has changed the role of conservation and people's relation to the natural world, this chapter now moves on to examine the unruly ecology and economic uncertainty that threatens the long-term future of the Production, Protection and Inclusion model. To do so, it introduces the example of the cacao industry in the Huayabamba Valley and how it became central to dreams of a productive regime of conservation.

## **Cacao as Cause and Solution to Deforestation**

Cacao is emblematic of the transformation of the San Martín productive regime and the changing role of commodity crop production from being seen as a driver of deforestation to one of agroforestry, reforestation and integration with conservation goals. As such, this section looks at a brief history of the crop and the challenges Pur wanted to solve in its long-term sustainability before showing how these solutions have been applied.

Although native to the Amazon, cacao is largely a recent import to the Huayabamba Valley in its current productive form. While early migrations to San Martín were driven by state-sponsored initiatives in the 1970s to encourage people from the highland departments of La Libertad, Amazonas and Cajamarca to migrate into Amazonia, this was to raise cattle and grow rice, sugarcane, and coffee (Schjellerup 2000), although coca, for the illicit production of cocaine, was the crop that dominated the Huayabamba landscape.

Farmers who were working in the valley in the 1980s spoke to me of coca covering nearly all *chakras* (fields or plots) in the area and providing the only reliable source of income. While some of those still residing in the valley highlighted the high value of coca and relative financial stability that it brought for a time, most stories of this era focused on the horrors that followed, with the violent incursions of the terrorist groups Sendero Luminoso and the Túpac Amaru Revolutionary Movement.

Coca production in San Martín peaked in the 1980s at about 30,000 ha (UNODC 2011) and the signs of its past dominance of the landscape can still be seen in overgrown plots and abandoned airstrips. While it continues to be grown in certain areas of the valley, since the turn of the millennium it has become the focus of a large-scale transformation to cacao. In 2002, cacao became a major focus of bilateral aid projects aimed at the eradication of coca. Driven largely in San Martín by the government's anti-drug production agency, *Devida*<sup>57</sup>, and by USAID through the 'Alianza Cacao' program, incentives and support were provided to local farmers to switch to cacao, in the form of expertise, seeds and loans and the formation of cooperatives. New cacao varieties were also imported, specifically, the globally dominant, drought and disease-resistant CCN51 seed. This proved a huge success in the region, with new exporters emerging and the slow conversion of the Huayabamba Valley to predominantly cacao production.

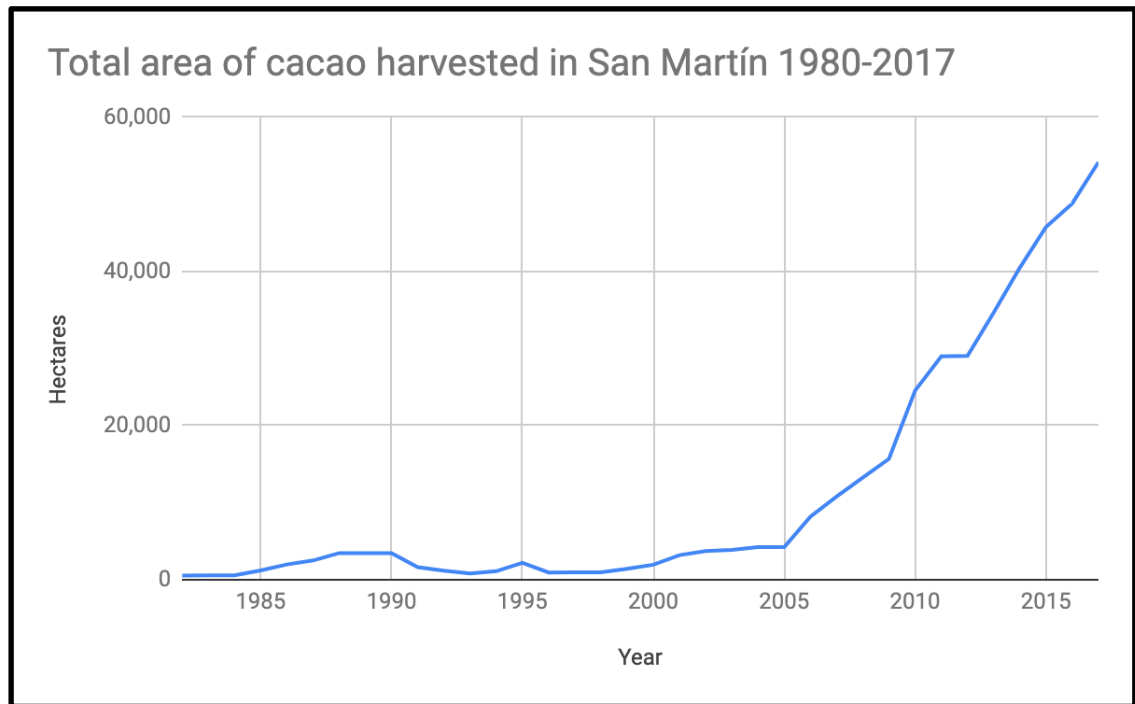
Nationally, cacao production accelerated from the year 2000, growing threefold in the country between 2001 and 2013, from 23,600MT to 71,800 MT (Donovan et al. 2017), with the amount of land dedicated to cacao production expanding from 41,000 to over 96,000 hectares in the same time (Scott et al. 2016). The Peruvian government was also quick to back the new crop boom, providing "lucrative tax advantages" (Bradshaw 2017). This drew ever-more investors, with Oil Palm plantation magnate, Dennis Melka, in 2013 hailing Peru as "the best place on Earth and the lowest cost location to grow cacao" (*ibid*). Between 2000 and 2014 Peru's cacao exports grew from a value of under US\$10 million to over US\$230 million (Scott et al. 2016). Estimates of the number of households involved in cacao production went from 30,000 in 2006, to 45,000 in 2013, to 90,000 in 2015 (*ibid*: 327). In San Martín, this growth in cacao was even more striking, increasing from fewer than 1,000 hectares of production in 1998, to 54,159 hectares in 2017 (see Figure 5.3).

In the Huayabamba Valley, while certain other crops and livestock are produced (notably coffee and cattle in the north of the region), cacao is at the core of the local economy. Some community members in the Huayabamba Valley claimed that their villages had more than 90% of families involved in cacao production. And the sheer amount of land dedicated to cacao growing is palpable, with the patchwork of small-scale producers resembling something more akin to industrial monocrop production. A trip downriver on any given day

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<sup>57</sup> The National Commission for Development and Life without Drugs (*La Comisión Nacional para el Desarrollo y Vida sin Drogas*).

is shared with numerous bags of processed beans destined for the buyers of Juanjuí and even the more remote villages have cacao collection stations for local cooperatives. If the sun is out, a stroll through any of the local communities is guaranteed to be accompanied by the strong smell of beans fermenting as they dry in the streets.



**Figure 5.3** Area of cacao harvested (hectares) (Source: MINAGRI, <http://frenteweb.minagri.gob.pe/sisca/> accessed 04 March 2019)

The replacing of coca with cacao was promoted across the region – with more investment and an ever-greater focus on CCN51 over less resilient local varieties – most vociferously by Alianza Cacao, but also by other development projects, local NGOs and government interventions keen to associate themselves with the crop’s success. The boom in cacao and decline of illicit coca production has even been referred to as the ‘San Martín Miracle’, a term used by NGOs, politicians and the President of Peru (Cabieses 2010), creating a development narrative that linked the eradication of coca with a vastly expanding agricultural frontier. However, despite the apparent success of the cacao boom – with production expanding and taking in an ever-increasing amount of territory, with aggregated yield numbers creeping ever higher – San Martín was seeing record rates of deforestation and increasing instability in the cacao fields. Exploring this contradiction between reported statistics and observed changes is critical to understanding the transformational limitations of cacao – and the Huayabamba Valley is instructive of the consequences of such a singular focus on the crop.

### **The cacao boom-and-bust cycle**

Despite flourishing when freshly planted in tropical areas, cacao presents a host of sustainability challenges. It is a notoriously fickle crop, suffering both ecological and economic challenges which lead to the periodic collapses. This tendency towards instability has been termed the ‘cacao boom-and-bust cycle’ (Ruf 1995). As noted by Clough and colleagues (2009: 198): “Instability in world prices and fluctuation in the area under cultivation characterize many cash crops, but even by that standard the history of cacao stands out due to the high number of rises and downfalls of geographical centers of production”.

From an economic perspective, cacao is a cash crop at the behest of global markets and it has to compete with low-cost centres of production, such as Côte d’Ivoire and Cameroon in particular. Ecologically, even the disease-resistant strains of cacao eventually succumb to pests and plagues and exhaust soils rapidly, driving the adoption of less sustainable practices, such as growing in no shade and increased fertiliser and pesticide use, and eventually abandonment of fields (*ibid*).

Peru has seen collapses in the cacao market before. In the 1990s there was a large drop in production as intensive planting was followed by economic uncertainty and diseases – particularly frosty pod rot (*Moniliasis*), but also witches broom and black pod, known collectively as the ‘cacao disease trilogy’ (Fulton 1989) – which left over 50% of cacao plots abandoned and the industry in “a state of near collapse” (Donovan et al. 2017: 172, Phillips-Mora and Wilkinson 2007). Nationally, Peru even became a net importer of the crop (Donovan et al. 2017).

There have been various initiatives that have aimed to provide a fair, and more stable, price to farmers, but of particular success has been the introduction of various fairtrade and organic certification schemes since the turn of the millennium and the creation of cooperatives to give farmers collective bargaining power. One resident of the Valley explained how the dominant cacao company in the valley in the early 90s, Romero, was paying anywhere from S/. 0.50-2 per kilo, when ACOPAGRO formed as a cooperative in 1992 this leapt up to S/. 8. With the support of foreign aid agencies, such as USAID as noted

above, cooperatives in the valley grew and were able to invest in certification schemes, such as Fair Trade, organic and UTZ (Donovan et al. 2017).

Despite these initiatives, however, multiple local leaders highlighted the general failure over the lifespan of cacao in the valley to raise anyone but the odd few out of genuine precarity, despite the fall in official poverty numbers. As explained by one NGO employee who has worked in the Valley for 30 years:

“So, what is the contribution to ridding the thousands of producers of poverty? In 20 years [...] if one were to do a real analysis of the 2,000, 3,000, almost 4,000 producers associated, the findings would be that poverty has practically maintained, but it hasn't grown. [...] So, I say, look. How many, with this example, with data, with numbers, how many [...] have we taken out of poverty? Few, none.”

It is within this growing, but vulnerable, agricultural frontier that Pur integrated its carbon offsetting reforestation and conservation work, ameliorating some of the problems generated by the original agricultural model while expanding production. Pur entered San Martín during a particularly bad time for the cacao sector in 2008. Prices had fallen dramatically and productivity was struggling to keep up with the emergence of pests and diseases. The failure of cacao production had also driven a sharp increase in deforestation as farmers sought new areas to cultivate crops. Then, as now, the strategy was focused on stabilising the crop and intensifying and diversifying production as a means of countering deforestation. As such, ensuring the ecological and economic sustainability of cacao has always been at the heart of Pur's approach to conservation and development in the Huayabamba Valley.

It was from working in the cacao trade in the valley that Pur was first created. As one of the co-founders travelled up the Huayabamba river in 2008 and saw the struggles of local farmers despite their fairtrade certification. As explained by one of local project leaders, this co-founder's dream for the valley was that the fortunes of the cacao farmers could be reversed and that cacao production could be made sustainable enough to continue for 200 or 300 years – or perhaps *forever*. This is a dream that lives on in the valley, with one leader reiterating the centrality of cacao to the strategic vision of the project, “It's a strategic vision that we have to always remember. It's not just romance. I want cacao to continue. I want cacao farmers to continue for, I don't know, a thousand years. But if I'm not being optimistic, 100 years”.

A great deal of research and work has been put into how this long-term cacao growing can be supported. While a classic boom and bust cycle is around 25 years, the age when soil tends to become exhausted, parasites and diseases take over and trees must be replanted, there are examples of high diversity and low-intensity growth that have been producing for longer, indeed as much as 100 years in traditionally-farmed, non-intensive, environments (Clough et al. 2009).

Pur's agroforestry systems were designed to replicate this diversity through shade-growing under newly planted trees, often intercropping cacao with timber and plantain. In itself, shade growth is not a new practice and has been practiced by various groups in San Martín (even the notorious company Romero) for many years (see Scott et al. 2015). Pur's model, however, offers the added income from timber and carbon credits to support its work and create a more holistic connection between ecology and economy in the valley. This logic has placed cacao – its promotion and arresting the boom-and-bust cycle – ever more central to Pur's strategy and productive regime. As cacao is most successfully grown in newly deforested areas if support can be given to help intensify and elongate the life cycle of cacao plots, then deforestation can be avoided and farmers will have a more reliable income stream without the need to encroach further into the forests, curtailing any shifting cultivation practices. As stated in the REDD+ project documentation: "the objective is to improve productivity, quality, to increase revenues from agriculture with the same land area, and avoid further deforestation" (Pur Projet. 2012b: 6).

To support the production of cacao, much of the efforts of project workers have been on ensuring better practices and prices for producers. This is done with a particular focus on new techniques to boost productivity, methods to counter and control the rapidly spreading diseases in the valley and through projects aimed at diversifying production, largely with a view to tapping into new value chains. This section now moves on to explore the integration of agroforestry and reforestation practices in the Huayabamba Valley and how it has fared in countering the ecological and economic instability of cacao.

## Arresting the Cacao Boom-and-Bust Cycle

### Improving productivity

In 2019 a story had spread around the valley that had reached almost apocryphal status. It was being told and repeated by farmers in fields, at meetings, by project workers and by government officials. While most producers were facing diminishing returns (or outright ruin) from their cacao, people talked of one farmer who was producing 9,000kg of cacao per year from just 3 hectares, which was often compared to another farmer who was getting 8,000kg from 20 hectares. While I never found the source of this story, or indeed its veracity, it was held up as an example in meetings and casual conversation as a model to follow. While few could dream of quite the same gains, on hearing of this success, farmers talked of aiming for harvests of 5,000kg from 3 hectares if they used the same methods. For many, this target of 1,500-2,000kg of cacao per hectare represented an enormous intensification, with one association leader explaining that many farmers were currently producing just 200-400kg per hectare. The methods were explained by – and to – cacao farmers as being based on good pest management and the liberal use of organic fertiliser.

Fertiliser and new seed varieties are increasingly promoted by project workers, the regional government (particularly through its '*Proyecto Cacao*') and other cacao groups such as Alianza Cacao, including through social media, training sessions and various advertising campaigns. The walls of cacao cooperatives and funding groups like Alianza Cacao are adorned with signed commitments from farmers to use these new highly productive techniques, but some cacao farmers mentioned the increasing cost to them of production. A sack of organic fertiliser ranges in price from S./ 20-40, with two sacks required per hectare, applied at least three times a year. One community (backed by further investment) is developing its own organic fertiliser from various ingredients shipped upriver in a bid to decrease input costs while increasing productivity<sup>58</sup>, but for most communities without this additional funding, the spiralling costs of production represent a greater risk.

Many farmers are also investing in high value cacao varieties, *fines de aroma*, that can fetch higher prices on international markets. While one leader explained that this money is yet to

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<sup>58</sup> One local farmer noted to me that this increased fertilizer use is also allowing people to expand into sloping areas previously considered non-cultivable.



filter down to local communities, or indeed the innovators of these hybrids, they do represent a differentiator in international markets from the standard CCN51 seed that dominates trade and is not deemed suitable for fine chocolate due to its bitter and uninteresting taste.

An example of the potential market for the new cacao breeds comes from a Swiss/Peruvian chocolate company that is working with two communities in the valley, linking them almost directly with luxury markets in Europe to provide a far higher, ‘ultra-fairtrade’<sup>59</sup>, price of S/. 12 per kilo (in comparison to the fluctuating prices around S/ 5-9). This niche market, however, is still small, and even farmers who are part of this cooperative/company hybrid (and who represent a small portion of the valley’s population) said that they have to sell a portion of their product to other buyers for lower prices. Furthermore, higher value cacao strains require grafting or replanting of crops and tend to be lower-yielding and less resistant than the more commonly planted CCN51, representing a further risk to interested farmers. For many farmers chasing the potential value from *fines de aroma* breeds requires a greater gamble than CCN51, which is still seen as the most dependable option in the valley.

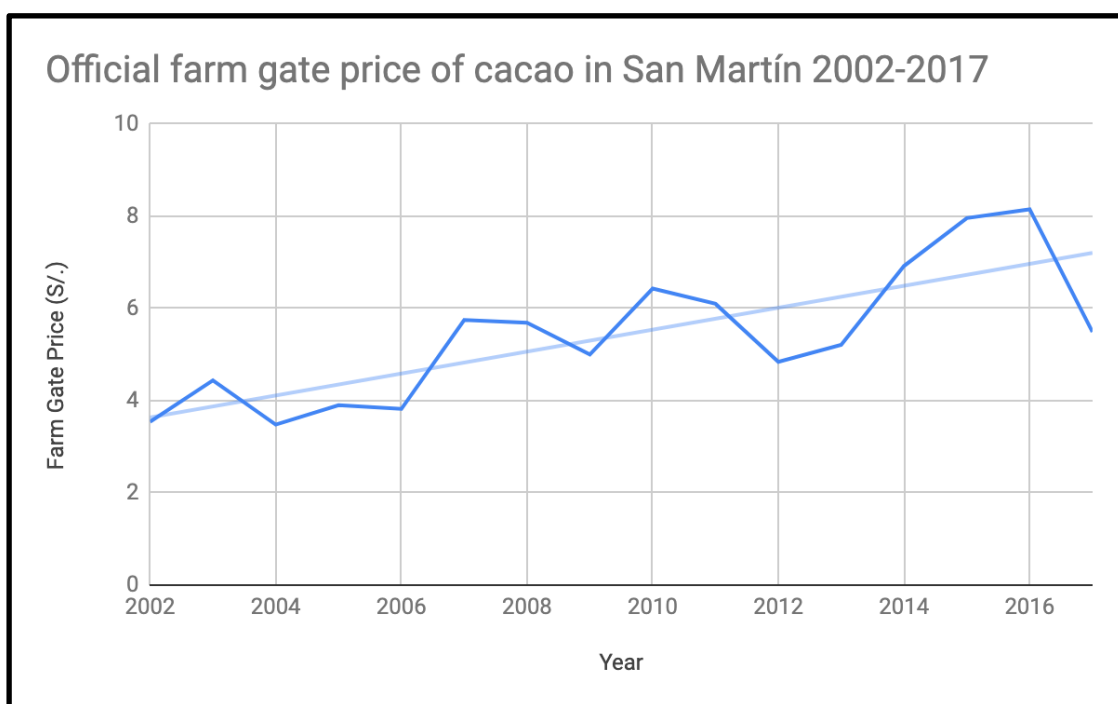
Despite these various initiatives to increase productivity and stabilise cacao-based incomes, then, farmers remain exposed to a high degree of risk. The use of new seeds and increased fertiliser is common in the late stages of a cacao boom and bust cycle as producers chase productivity that old plots lack (Clough et al. 2009). To return to our model farmer who was producing 9,000kg of cacao per year from their 3 hectares, one element often left out of the story was the land he was growing on. While most people wanted to tell me about the technical approach this farmer was taking – his seeds, fertilisers and pest control – on asking more about the story I was told that this farmer was growing on newly cleared land – thus taking advantage of the accumulated richness of the soil and (current) absence of pests. In this instance, ecological instability was obscured by the promises of technical optimisation.

Furthermore, the price of cacao has not been stable in the valley, although showing a general rise in value (in part due to the certification of a growing amount of cacao), as reflected in the official data in Figure 5.4. In the fields, cacao farmers complained of both a general downward trend in prices, despite increasing input costs, and vastly changing prices. While

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<sup>59</sup> The resulting chocolate bars are sold in Europe at \$9.50 a bar (8,50 CHF not including postage) and while currently successful, this represents a very niche, and thus potentially unstable market.

the average price received for cacao was at S/. 7 per kilo during fieldwork in February 2018, it was just S/. 5 in 2017, and at US\$1.53 this was lower than the farm gate price in Cameroon<sup>60</sup>.



**Figure 5.4** Official farm gate price of cacao (Source: MINAGRI, <http://frenteweb.minagri.gob.pe/sisca/> accessed 04 March 2019)

These fluctuations come thanks not just to global price changes, but also the quantity of cacao produced in each harvest. When there is a good harvest with a lot of cacao produced, prices go down sharply, when it is poor, prices rise. In April 2019, for example, the price rose to S/. 6.5 per kilo, but this was thanks to the lack of cacao produced in the low season. Here, the impact of pests and diseases on price can also be seen, as the more they ravage crops in the valley, the more likely prices are to go up for the lucky few not affected. This makes the control of infestations and outbreaks even more critical.

### Controlling disease

In the Huayabamba Valley, disease has particularly come in the form of the cacao pod borer, *Mazorquero*, and, the fungus, frosty pod rot. The pest mazorquero, locally known as ‘the worm’ (*el gusano*), the scientific names of the two noted species in Peru are *Carmenta theobromae* and *Carmenta guayaba*) enters the cacao pods and lays eggs, spoiling the seeds inside, and has

<sup>60</sup> Cameroon data sourced from FAO Stat: <http://www.fao.org/faostat> [Accessed 28 August 2019]

decimated regional harvests in recent years, as will be shown below. Frosty pod rot, or *Moniliasis* as it is known locally (and as it was previously referred to in the literature on the pathogen, Evans 2007), is an aggressive and rapidly spreading fungal infection (Phillips-Mora and Wilkinson 2007) that has returned to the valley having previously caused a local collapse and is affecting areas previously under less stress from the mazorquero.

The methods of controlling the mazorquero and frosty pod rot are currently largely manual. While fumigation and other methods have been used, in 2018 the regional government, with the time and logistical support of Biocorredor Martin Sagrado workers, was promoting a method of manually removing any pests from fields to counter mazorquero. This was introduced at one meeting as an incredibly simple way to change practices which would see the plague eradicated in the valley rapidly.

Cacao farmers explained this process to me in greater detail. Pests had to be identified amongst large plots and carefully removed, with infected fruit properly disposed of. Given that the bulk of most farmers' days are already spent caring for and harvesting the cacao, this represents a significant amount of extra work. As explained by one group of farmers, given a standard 3 hectare plot, much of your time can be quickly taken up implementing these practices. What was proposed as simple, transpired to be increasingly time and labour intensive. This is likely to be compounded by the spread of frosty pod rot, renowned for its difficulty to contain and control, a process which is said to be equally labour intensive and not financially viable when cacao prices are low (Phillips-Mora and Wilkinson 2007).

The density of cacao plots driven by the intensification of production also proved a challenge for these farmers. While clearing a plot of diseases and pests may be possible, various farmers complained of them quickly spreading back from neighbouring plots – exacerbated as both are airborne, mazorquero is a flying insect and frosty pod rot spores are produced in vast quantities and spread by wind. Equally, spending time focusing on one pest doesn't stop the spread of another. This was noted by farmers who, frustrated by the spread of mazorquero, saw efforts to counter it undermined by the subsequent rapid spread of frosty pod rot in the valley.

While cacao faces local pests and diseases wherever it is grown (Clough et al. 2009), the rapid spread of these two pests/diseases highlights one of the key issues with the success of cacao

in the Huayabamba valley, the sheer quantity of the crop now grown there. Even with better practices, the increasing area and almost monocropped nature of cacao in the area encourages more pests and makes their effective control all the more difficult. This is exacerbated as the original cacao boom led many people from the local town of Juanjuí to make a small investment in cacao plots upriver in the valley. While these proved profitable, many are now left unattended, to be reclaimed by the forest until the price of cacao makes further investment worthwhile, thus leaving sources of infection in the region. As one shop owner in Juanjuí explained, with prices low, it made little sense to invest time and money into the cacao plots, but when prices bounced back they could be farmed again.



**Image 5.1** Diseased cacao pods during a harvest in 2018

Multiple cacao farmers in the valley explained the poor current condition of the crops and the ineffective methods to control the plagues. While some farmers with more land and wealth can survive through this and the lower prices earned for infected cacao sold on national, rather than international markets, many are devastated and in need of genuine alternatives. Indeed, local NGO workers in the valley consider cacao to be in a full-blown crisis, with unpredictable prices and spiralling issues with both frosty pod rot and mazorquero in the valley, spoiling 40-50% of some farmers' crops. This was the case with one resident, Ron, within the Biocorredor Martín Sagrado project:

“What we want here is to get out of the production of cacao! You can’t imagine the plague, vast plagues, vast plagues [...] It’s more than 40%. Look, I’ve got my cacao and I can’t combat it. Imagine it! I’ve worked for ten years for my product to be useless [...] I don’t have support for anything! From an NGO or the state, or the market.”

The difficulties with diseases – and associated threat of deforestation – has led to an increased focus within the REDD+ project on supporting commodity crops, specifically through more diverse agroforestry systems and providing alternative income streams to cacao.

## **Diversification with and Away from Cacao**

Diversification potentially serves the dual purpose of countering the spread of diseases (which prosper in monocultures, as noted above) and providing a degree of local resilience to instability in the cacao market (ecological or economic). This is reflected in Pur’s strategy for diversification of incomes, particularly through the timber market, alongside other smaller livelihood projects such as beekeeping and small fish farms.

Despite its centrality to the future of conservation in the Huayabamba, the need to diversify away from cacao has been recognised for many years. Indeed, it was in the original project development documents for the Biocorredor Martín Sagrado REDD+ Project. Whilst cacao is still the most popular crop in the valley there is also a growing recognition with farmers and some local workers that it may be time to move away, at least in part, from intensive cacao production. As noted by one project worker “Already people right now don’t want to wager on cacao. They know that the price... the plagues... that it’s terrible”. Or as one frustrated farmer put it “we want an NGO to invest – we can invest in a small market here, make another product, a product that can replace cacao, or support a product to replace cacao”.

Diversification can be approached in a variety of ways – from building greater local self-sufficiency and (bio)diversity of ecosystems and diets to economic diversification through the creation of new markets. For the most part, projects in the Huayabamba Valley aim for the latter. This is not necessarily a cynical ploy to extract the most value from the region, but a complex combination of factors which make production for self-sufficiency (which could

offer far greater biodiversity of plots) difficult to promote in the valley. Indeed, Pur's original plans included measures of 'food sovereignty' a term associated with the agroecological movement which assesses the amount of food produced for local consumption. Over time, however, this morphed into the more familiar 'food security', *being able to afford* sufficient food.

The reluctance to produce for self-consumption was explained by various project workers, farmers and government employees as a hangover from the years of the drug trade, where coca growing was so profitable it made little sense to grow anything for self-consumption when it could be so easily bought. One government worker talked of a sense of lost cultural identity after switching to coca production, joking that people were now more focused on getting money to pay for sound systems and beer than grow food for local consumption.

Conversations with residents of the Valley would suggest the actual reasons are more complex than this. One elderly couple explained that they had previously grown a range of crops when they lived deeper in the forest, but once they had settled in a village found there was little land suitable near their home. Today, very few of the residents of the larger villages, such as Dos de Mayo, grow much for self-consumption. Instead, the flow of goods can be seen in the contents of the boats that go up and down the river every day – cacao and plantain go down, rice, pasta, tins, cheap cuts of meat and other staples come back up.

One young resident of Santa Rosa complained that people lack any interest in eating the high-quality organic food that can be produced locally, particularly the tendency people have to rear wild hens (*gallinas*) organically on their plots, only to sell them downriver to buy mass-produced chickens (*pollos*). As they explained, projects to encourage more self-sufficiency were likely to be ignored in favour of reinforcing the current system of producing and purchasing. Sitting around joking over Western diets one evening, a group of residents of another town laughed at the suggestion that they would produce and consume vegetables, preferring instead to have meals based on rice, pasta and meat. While the tone was jovial, this conversation reflected the dim view taken of self-production. While Pur were (and to some degree still are) interested in supporting more diverse production systems, an uneasy compromise has been reached to continue the same style of production and purchasing.

This inability to diversify production in a more holistic sense is echoed in other projects. Another of Pur's projects aimed at diversification in the Valley is *Finca la Media* (loosely translated as 'half the farm'). Rather than simply bringing in one new crop, this project aims at a more fundamental diversification of farm plots, with more crops interspersed with each other. These new crops will be selected for their potential to create new export markets or tap into existing ones, thus diversifying the producer's income as well as the resilience of the cacao plot.

While plans for this scheme map out very diverse plots, local farmers signed up to the scheme explained it simply as a way to combine cacao with timber and *sacha inchi* (a nut that was experiencing a boom as a trendy superfood in 2018) to get better productivity and yields from the cacao, while also getting further income from the timber and sacha inchi. Where original plans highlighted a multitude of benefits and a more holistic vision, what was explained by farmers in their fields was simply a way to earn more money, with diversity falling by the wayside in favour of high-value crops. While *Finca la Media* is still developing, it highlights some of the challenges in promoting diversification to as large a group of farmers as are involved in the remit of the project. While experimentation may be achievable on a small scale, the majority of farmers end up planting the same crops making emerging markets less stable and decreasing market prices.

For the early adopters that planted sacha inchi (not just a trend in the valley but all across the region of San Martín), for example, the glut in production in 2018 caused a huge price drop from around S/. 24 per kilo in 2018 to just S/. 1-2 in 2019, making the newly converted parts of producers' land practically worthless and calling into question the ability of new markets to provide genuine diversification. As noted by one project leader in Peru:

"We realised one thing, we proposed the reforestation project to them, everyone did reforestation. But if we propose we're going to do another value chain, for example, if we say to them, 'we're going to plant ginger', everyone would plant it. But if we also said we're going to work on the raising of small animals, chickens for eggs, everyone would do it. But what's the problem? The market. Fact! ... the producer does what the experts from the West say, but the major frustration comes when the market says: 'No. Your product doesn't have a good price. Thanks, see you later'!"

## Diversification towards timber

The integration of timber into cacao plots faces similar challenges. The timber trade is one market that is being pursued and is considered the biggest hope for economic diversification, with the new REDD+-funded reforestation plantations certified by the FSC in 2019. Multiple project leaders and government workers enthused about this possibility before the certification, placing it at the core of both the project and the regional productive strategy of the valley. One regional head of conservation even considered a functioning timber trade as their ‘dream’ for the future of the valley<sup>61</sup> and FUNDAVI’s reports talk of their plans for the planting of 40 million trees across San Martín as “the most important in Peru, because [this area] will become a forest power” (FUNDAVI 2018: 74).

The sheer amount of ‘reforestation’ plantations created, and the struggle to bring timber to market (thanks to both transportation issues and the lack of legal permits), led to Pur Proyect establishing a new for-profit company to market and sell non-carbon credit forest products, *Amazonia Justa*. The aim of the company, as expressed by one project leader was to allow farmers in the valley to have access to “the best technology to take advantage<sup>62</sup> of the most timber possible”. *Amazonia Justa* began to dominate the topics of many meetings and discussions with project leaders in 2018, and even more so in 2019, as the timber industry became ever more important to the long-term sustainability of the project.

As detailed in Chapter 4, Pur’s plantations are optimised to meet minimum forest definitions under Peruvian and UNFCCC accords<sup>63</sup>, the plantations can be harvested sustainably in a rotational system to allow for the sale of timber, while also accruing carbon credits. Plantations are also meant contain a combination of trees of short, mid and long-term growth (again, optimised to ensure greatest returns in the space provided), although in reality many of the farmers in the Huayabamba Valley prefer to rely on just one of the rapid growth species *bolaina* and *capiroña*, which can be matured, cut and sold in 5-7 years (while also

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<sup>61</sup> This response came from a question asked of most respondents regarding their dreams or visions for the future of the forests. Most responses related to the sustainability of the forest and biodiversity itself.

<sup>62</sup> There is a clear and telling synergy between the term *aprovechar* as it is being used in San Martín and the discourses of improvement in the English Enclosures, wherein: “Making land productive – that is, *improving* it – was becoming the basis for property rights; and more particularly, the *failure* to improve could mean *forfeiting* the rights of property” (Wood 2017: 157). In San Martín, the *aprovechamiento* of the land is both the focus of project activities and state incentives – particularly through the granting of 40-year titles if land is entered into micro-zonification programs.

<sup>63</sup> A minimum area of 0.5 hectares; A minimum tree crown cover of 30%; And a minimum tree height of 5 meters (see Chapter Four).



earning carbon credits). As noted by one Pur Projet worker, “They love capirona [...] We tried to promote more diverse [plots]. We said [...] three species parcel minimum. In some cases, you know, the farmers they really insist on having lots of capirona, lots of bolaina.”

This was reiterated to me by one of Pur’s implementation partners for the reforestation work which largely integrates timber into coffee agroforestry. From 2010 to 2015 work had focused on a *minimum* of eight species of timber in any plot, but had since reduced to a *maximum* of two or three. As noted by the head of reforestation, Jorge, this was for “reasons of business, of economics, logistics, many more factors. So it could be capirona, it could be bolaina, or it could be another species, purely eucalyptus”. Jorge explained that while diverse plots were better for environmental reasons, the number of species was reduced because for farmers the ultimate goal is the extraction of as much timber as possible. Thus, despite being planted at the optimum distance as stated in Pur’s plans, trees are still tightly packed with each other and the actual diversity of species in *chakras* rarely goes further than some fast-growth trees (often either *bolaina* or *capirona*) and, perhaps, plantain. The resulting plantations of trees in virtual monocultures may represent a profitable investment for local farmers or a productive potential market to support cacao, but in their role as carbon credit funded reforestation, seem stark in their uniformity and lack of biodiversity.



**Image 5.2** Reforestation plantations (predominantly of *capirona*)



**Image 5.3** Reforestation plantations (predominantly of *capirona*)

As with the ‘diversified plots’ of Finca La Media, rather than a simple top-down plan for profit-maximisation, an uneasy compromise appears to have been reached with timber production. Project workers, regional politicians and local farmers may all want long-term sustainability, but what works and spreads reflects what makes money and commodity crops continue being both the cause of and solution to deforestation.

### **Intensifying commodity production**

In 2019 a new round of long-term funding was secured for the Biocorredor Martin Sagrado REDD+ project, but with it, following a site audit by the company involved, was an even greater emphasis on primary crops. Seeing the issues with the cacao trade in particular, the company in question wanted the stabilisation of the sector to be a priority, something that was reiterated by all senior project workers in 2019. This involved a doubling-down on the logic of sustainable intensification or as described by one leader of the REDD+ project

“Now the focus of much of the project is going to be more linked to the topic of supporting the principal economy of the producers. It didn't have this component much before. It wasn't very linked to that. It was more focused on the protection of the forest, with the guards, with the people, the environment, but not much towards the crops.”

In response to this, project workers have proposed the same solution – to push for better production methods that control the diseases and a modest attempt at diversification, mainly through timber – but expanded this logic across ever more of the project zone. While cacao is exceptional in its spread throughout the project (and as a key area of expertise for Pur and two of the coops), the approach is also reflected in the two other key commodities that the projects support – coffee and cattle. The new strategy was described by one leader: “We’re going to advance with agroforestry with coffee. Lots. Everywhere. All of the zone with more intensity”. Another leader from the north of the project zone reiterated this: “the productivity of coffee, and the promotion of coffee and the search for markets. The coffee of this community. And the best production of coffee there. That is our principal goal”.

Coffee is at an even greater risk to disease than cacao. As one coffee farmer explained (while working as a moto driver due to the downturn in the sector): while cacao infected by mazorquero can be sold on the national market, infected coffee has no market. This means that the spread of the coffee rust disease, as is being seen in the northern parts of the project zone, can potentially wipe out entire livelihoods. Equally, cattle farming is notoriously bad for the environment (Pendrell et al. 2019). While this will be explored in greater detail in Chapter 6, current plans in the cattle sector located within the restricted concession area in Martin Sagrado were described by local residents and by Pur’s project leaders as intensifying production to reduce land use. To have ten cows per hectare where farmers currently have two. While this is part of a wider trend of the intensification of livestock (Merry and Soares-Filho 2017), one long-time conservation worker in the region highlighted the paradoxical nature of expanding the number cattle within the conservation area and the inherent contradictions of ‘sustainable cattle’.

Despite aims for improving productivity, controlling the emerging pests and diversifying incomes, the project has thus come full cycle with an ever-greater focus on core crops. One international cacao expert highlighted the danger of this model which asks for ever-increasing production from an ecological perspective. They explained that while well-managed cacao can indeed last 100 years, this requires a ‘super-diversity’ of crops, with multiple different fruit trees intercropped, and with it a lower yield of cacao. Having visited the valley several times over the past 20 years they even noted that in the five years or so since their last visit the shells of the cacao had weakened locally thanks to the intensive growing practices. This weaker shell is a key factor in the spread of *el gusano*, making it easier for the pest to enter the



fruit and suggests that shade growth-based, agroforestry systems is not the simple solution it is proposed to be – reflecting a broader debate about its ability to counter the long-term effects of cacao production (see Abdulai et al. 2018, Norgrove 2018).

As detailed in Chapter 4 such an issue with overly-intensive production is the model of development that Pur aimed to counter the effects of, rather than reproduce. It is one which assumes the only way to deliver local development and conservation goals is through extractive cash crops – now supplemented with carbon and integrated into a wider productive regime of conservation. This is far from the original plans of the project but has emerged among the competing desires of project workers and local communities to obtain ever more productivity from the natural world. The question to be asked of it is whether new models of production offer a different future to the communities that commodity crops have thus far failed.

## **The Production of Nature as Infrastructure**

Before moving on to Chapter 6 and how the productive regime of conservation is reflected in changing views of biodiversity and the natural world, this section will examine how the self-reinforcing nature of commodity crop production is locking in specific development pathways for local communities, risking a repeat of the same failures of the cacao sector before Pur's arrival.

The Production, Protection, Inclusion model and associated zonification of the region of San Martín has created both an economic centralisation in the control of valuable assets by a few well-networked groups, but also a geographic centralisation (Smith 1990) as areas of specialisation are created. Locally, this reinforces the logic that favours crop specialisation at the cost of self-sufficiency and, over time, the centralisation of production. The centralisation creates new geographies of risk as producers are made increasingly vulnerable to cycles of profitability and crop failure, while at the same time the ambit of coops and other commodity companies in the region grows, spreading their risk across an ever-greater number of producers. As the patchwork of small farms, thus begin to resemble industrial plantations, they are at ever-greater risk to the spread of new pests and plagues. This is well captured by Clough and colleagues (2009: 200) who note that “cacao does not escape the species-area relationship: the larger the area cultivated with cacao, the larger the number of species that

feed on the crop”. Thus, while all efforts may be made to contain existing pests, the sheer quantity of cacao is always likely to attract new species.

The mapping, while not without its positive aspects, has the potential to lock in these landscapes and their uses, through a specific production of nature that prioritises commodity crops over a diversity of socionatural landscapes. While a *campesino* in the Huayabamba Valley may have more secure land tenure thanks to these projects (and this is no minor accomplishment), communities may be tied into specific crops promoted by regional support and infrastructure or limited in expansion or rotational cropping practices by strictly delineated areas of use or protection. More broadly, it reflects a specific form of political forest (Peluso and Vandergeest 2001), which authorises certain types of knowledge to measure and ‘optimise’ the production of goods and services, including conservation (Oels 2005, Youatt 2008, Turnhout et al. 2014).

While the rapid growth of cacao shows no sign of slowing in the conversion of new areas, however, production in many plots is facing insurmountable problems. There is no doubt that Pur and FUNDAVI’s intervention in the valley has aided the ailing cacao sector. This is critical as disease in other parts of the region have led to new areas of deforestation and reports in some cases of farmers abandoning crops to go back to illicit coca production (Taj 2019), something that, according to one FUNDAVI worker is beginning to happen in the valley. However, the three responses to the local crises generated by the cacao sector – improving productivity, controlling diseases and diversification to new markets – highlight the reinforcing nature of commodity production. The same logic appears to be being applied to solve the problems it has generated.

While the Biocorredor Martin Sagrado REDD+ Project wanted to change livelihoods in the valley, it’s current framing and focus of activity is largely based around ongoing commodity crop production. Where other projects have been included, they are often based around the accessing of new international markets to varying degrees of success. Furthermore, despite the cacao industry failing to raise the local population out of poverty (as noted above), it is a model being replicated with new commodities, specifically timber. This model leaves little room for alternative ideas of what a sustainable future for the valley could look like. This is all the more critical as the commodity- and market-based approaches in the agricultural sector seem able to offer only a suite of projects focused on adaptation, rather than genuine

transformation (Nelson and Phillips 2017). New cash crops are not the only pathway available to the communities. San Martín has a wealth of historical knowledge to draw on, but where other small scale projects in San Martín focus on reclaiming indigenous farming practices based on terraced land and the production of biochar to grow diverse crops, largely for self-consumption, the prospect of such an approach being explored in the valley is largely laughed off by project workers and deemed impossible without the financial incentive.

To provide an example of this dynamic, and the potentially limited view of development pathways, one can consider one of the northern villages involved in the project, Canaán. Located deep in the forest, fifteen hours walk along a difficult and deeply degraded track over two days to the nearest village with a road, transport is difficult and unlike most of the villages involved in the project, trade takes a back seat in these areas in favour of production for self-consumption. The one exception being the cattle trade, with cheese consumed locally and income being made from the sale of cattle (the main reason behind the deterioration of the track to the local village).

This different way of life provides an opportunity for the project to offer an alternative view of development. Indeed, many of the projects that have been successful elsewhere in the valley simply don't make sense here. And yet, what is being offered is a view of trade, focused on growth and enhancing of production. This includes the seemingly contradictory efforts to support the cattle trade – as destructive as it is – in the villages around the region.

Among the projects being worked on was the construction of a small cheese processing plant, offering the opportunity to make different types of cheeses, with the promise of trading it for higher value after making the fifteen-hour trek to the local village and transporting it into the nearest population centre, a further five hour drive away. The citizens of Canaán are already at a significant disadvantage to cheese-producers nearer the local city of Rodrigo de Mendoza who have lower costs for transport and storage, but the project is being enthusiastically pursued as a potentially great source of future income. While an alternative livelihoods project may have been successful in the south, the same marginal benefits for those producing such a product in Canaán, are negated by the cost and time involved in transporting it. The somewhat illogical nature of this scheme was highlighted by one local leader at a meeting in Canaán: “you will produce five thousand litres of honey here, where will you go? It makes no sense. So, this aspect is contradictory, isn't it?”.

When these issues were brought to the attention of project leaders in Paris there was an acknowledgement that they were in a unique position to move towards a more transformative intervention and push beyond a specifically commodity-focused view of development and a sense of almost limitless growth of production. Such transformation is likely to be challenging, as the logic of intensification has proved reinforcing across the project and a more transformational approach to development will require a complete change in mindset from actors in the valley, the region and Paris. Such a change in mindset would mean engaging with the holistic, but messy, political work of what truly diversified landscapes may look like in the valley, or to breach the possibility that the way forward for some may be a *reduction* in cacao production in favour of genuine multi-cropping, self-consumption and agroecology. In over-emphasising the economic and ecological resilience of the crops and the wider natural world, the projects may instead continue to reproduce the same failings that the cacao sector has delivered to local communities over its history in the Huayabamba Valley. The contradictions that emerge when we assume the stability of the natural world at the same time as we insist on it working ever harder at the margins are at the core of the remainder of this thesis.

## Conclusion

This chapter has introduced the Production, Protection and Inclusion strategy of San Martín and how the work of Pur Projet integrated into this model of land-sparing to create a productive regime of conservation. This is an approach that has undoubted benefits; combining the zonification of land with ambitious agricultural production goals and broadening the creation of protected areas to grant local associations the right to register land in conservation concessions.

The evidence presented above calls attention to how the model has created a new production of nature in the region, with the rhetoric of conservation reshaping power in physical and at times surprising ways. The resulting political forests of the region obscure the complex history of the Huayabamba Valley to meet the demands of global, regional and local politics. At its most extreme, the combination of production and protection can now be reported in simple, clear terms that appeal to Western consumers, with headlines such as: “Peru: How chocolate saved a community and a protected area from the drug trade” (Romo 2018).

Drawing on the Foucauldian-inspired literature presented in Chapter 2 (particularly, Oels 2005, Youatt 2008, Fletcher 2010, Turnhout et al. 2014), this process can be viewed as granting certain groups the power to define discourse around what conservation and development is desirable and the knowledge, statistical indicators and markers of success which can validate it.

As explored above, however, the ecological and economic contradictions of export-focused commodity production are beginning to emerge at the very point that the model is being hailed, not just as a potential solution, but *the best solution* to climate change, deforestation and rural poverty by local leaders in San Martín. As noted by Chambers and colleagues (2019:27) in their study of conservation and development projects in the region “the commonly put forward narrative that material incentives and protected areas provide an easy pathway to long-term forest ‘allies’ was substantially overstated” and this chapter has elaborated on some of the causes and consequences of this narrative.

The approach to optimising production, sustainable intensification and generating value has tandem with these development projects and conservation schemes and while development is considered a holistic concept by many leaders across the region, efforts on the ground suggest a reinforcing logic of commodity production that risks substituting economic growth for more diverse development pathways for local communities.

The physical evidence of what ‘succeeds’ and spreads through celebration, negotiation or negation is reflected in the distinct landscapes of the Huayabamba Valley, where plantations and cacao plots have begun to make small scale producers resemble industrial monoculture agriculture. These productive landscapes are hard to ignore when travelling anywhere in the region, with areas dedicated to cacao production often spreading across vast quantities of fields, where a combination of success-stories and state-based incentives see an increasing number of small-scale producers turn to cacao production<sup>64</sup>. Here, the approach to the natural world has its echoes in the built environment – as noted by Henri Lefebvre (1991: 75), where the demands of the market meet a desire to scale, “repetition reigns supreme”.

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<sup>64</sup> This has parallels with corn farming in Myanmar as noted by Franco and Borras Jr. (2019: 195): “where the ongoing transformation of much of Northern Shan State’s once-biodiverse and variegated land uses into an increasingly uniform small farm-based corn monoculture subordinated to merchant capital”.



It is in the repetitive landscapes and ever-greater push for efficiency and optimisation that this chapter has started to assemble the building blocks of green infrastructure and the emerging dynamic between protected areas free from humans, reforestation plantations and intensive production, all pushing nature ever harder to serve human development. Green infrastructure, however, may be somewhat less stable than we like to think. The example of the cacao industry in the Huayabamba Valley highlights some of the limitations of the land-sparing model, with nature reacting in unruly ways and rebelling against plans to control it.

Furthermore, while the idea of a productive regime of conservation offers a powerful narrative, it does so with a very limited view of conservation and development, prioritising a financialised approach that fails to challenge existing inequalities. The question raised here, then, is whether Pur has done enough to look beyond export-focused economic growth as a route to development, repeating a common failure of cacao and agro-commodity sustainability initiatives, which “do not challenge power relations and so carry risks of reinforcing power inequalities” (Nelson and Phillips 2017: 260). The chapters that follow will take this further, looking at how the success of green infrastructure comes at the expense of alternate views of living in and with the natural world. In doing so, it challenges the premise at the heart of land sparing and efforts to combine the worlds of ecology and economy, which suggest that people will not take material incentives to continually expand, but instead foster a deeper intrinsic motivation to care for the forests.

## Chapter Six: Making Trees More Valuable – Private conservation in practice

“What is a conservation project?”

“The aim is for the forests to have a higher standing value than they would have cut by creating a financial value in the carbon stored in the trees”

*Slide taken from FUNDAVI presentation to communities involved in the Martin Sagrado Conservation Concession (13/04/2018)*

This thesis has thus far shown the ideologies and axiologies that have emerged with the rise of carbon offsetting (see Chapter 4) and how the idea of land-sparing promoted in San Martín pushes a radical separation of protected areas and productive land, asking nature to work harder on the frontiers (see Chapter 5). This chapter now moves on to explore what this approach means for the work of conservation.

To do so, it will look at what ‘conservation’ means in the context of Biocorredor Martin Sagrado REDD+ Project and how it impacts those living in the Huayabamba Valley. Despite the increasing focus on production and expansion explored in Chapter 5, the various projects falling under the banner of Pur Projet in San Martín are still tied to the idea of conservation. While a variety of indicators and measures of success exist on the ground, rhetoric and funding streams rely on the notion that money spent by Pur is put in the service of the long-term sustainability of the San Martín Yungas landscape.

Conservation as a concept is mobilised and spread throughout the project in a variety of ways but, as this chapter will show, there is an increasing tendency for it to be based on maximising the exchange-value that can be generated from ecosystems – be it from carbon credits, timber, medicinal plants or tourism – to provide for their long-term conservation. This approach, while successful in its core metrics on a project-level, also carries long-term risks to the project. This chapter explores these risks via three specific trends associated with the increasing focus on finding and creating exchange-value in the natural world: (i) the emphasis on extrinsic motivation; (ii) the need for time and focus on the monitoring and verification of abstract goals and administration, and (iii) the socionatural relations that it promotes.

The approach relies on a common belief that citizens of the valley only respond to financial rewards for meeting conservation targets. While this has certainly generated a great deal of interest in the project and legitimised its success at the regional level, this chapter will examine whether this is ‘crowding out’ (Agrawal et al. 2015) the intrinsic motivation that originally inspired conservation work in the valley. As shared purpose is replaced by metrics established from afar, the bureaucracy associated with verification of the project diverts time and focus from the basic conservation work of patrolling and reporting incursions. The project, in turn, employs and attracts those who work with timber, forestry and co-operatives, rather than biologists and conservationists.

Moreover, while carbon in the project is indeed saved – or at least diminished at a lower rate than predicted without the intervention – little is understood about the area of conservation beyond tree species and carbon content. Building on existing efforts to understand the interplay between carbon and conservation (Cavanagh and Benjaminsen 2014, Osborne 2015, Kay 2016, Ferreira et al. 2018, Massarella et al. 2018), the example provided below shows that where carbon may have been set up as a proxy for biodiversity conservation, it can become a target in and of itself, with potentially detrimental effects on other aspects of the work. Compounding the focus on carbon is a very specific conception of nature that is being extolled by project workers and leaders in the region. Through the experiences and stories of those living in the Huayabamba Valley, it is possible to observe a growing trend for people to see the existing forest as ‘poor’ or ‘empty’ compared to the tidy rows of trees in plantations. This narrowing view of the non-financial value of the natural world means fauna and flora become increasingly seen in utilitarian terms, for the exchange-value they offer to human populations.

The chapter begins, firstly, by providing an overview of the narratives of conservation in the valley and the logic that underpins the interventions of Pur. Secondly, it will consider how the focus on carbon is dictating practices on the ground, specifically in the work of patrolling the conservation concessions. Thirdly, it will show how this approach can be seen reflected in certain conceptions of the natural world in local communities, before, fourthly, analysing the outcomes of the work and assessing the potential future implications of this approach to conservation.

This chapter will thus build on the last to show that the focus on generating exchange-value – through narratives of carbon, measurable outcomes and profitability – not only prioritises productive activities over protective (as explored in Chapter 5), but allows for the continued exploitation of the landscape in the name of sustainable development and changes the very notion of what should be protected and how.

## Money for Trees

In April 2018 I attended a session introducing the Biocorredor Martin Sagrado project to leaders from communities in the north of the project zone, in Rodriguez de Mendoza, a town in the Amazonas region which provides access to the northern concession<sup>65</sup>. While these communities had officially been part of the project since 2010, their remote locations – being the only communities situated deep within the concession area – and their reluctance to engage with the project had meant the preceding years had largely been spent establishing community organisations and diffusing disputes (see also Cahuata and Angerand 2014).

While project leaders in Juanjuí had warned me of potential conflicts – claiming that people in the north ‘didn’t understand conservation’ and referring to them as the ‘problem communities’ – the meeting had an engaged audience, something I rarely saw across the project (see Chapter 7). It was an opportunity for presenters from FUNDAVI and ACOPAGRO (the cooperative managing the northern concession) to explain the goals of the project and its implications for these communities, and a useful snapshot of how the project positions itself.

On a slide titled “What is a conservation project?”, the answer provided was “The aim is for the forests to have a higher standing value than they would have cut by creating a financial value in the carbon stored in the trees”. One enthusiastic presenter expanded on this: Trees consume CO<sub>2</sub> and emit oxygen. In doing so, they can counteract the emissions from developed countries. This means that countries can pay communities to conserve trees, or better still, pay even more to plant new ones.

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<sup>65</sup> Notably this was in 2018, eight years after the project was officially started and some ten since the first debates around Pur’s involvement.

Conservation, in this framing, is an activity to capture the value held in carbon. REDD+ and reforestation were being proposed as both a simple transaction and a huge source of potential profit. This is reinforced in introductions such as the one described here; in training sessions and even workshops for secondary school children on ‘What is REDD+?’ and ‘How does REDD+ function?’. As such, carbon, and the function of trees in providing oxygen, was central in discussing the concept of, and motivation for, conservation. Indeed, signs designed by schoolchildren are hung around many of the villages highlighting how trees provide oxygen and Biocorredor Martin Sagrado’s role as the ‘lungs of the planet’<sup>66</sup>.



**Images 6.1 and 6.2** Signs in the villages of the Huayabamba Valley

The meeting in Rodriguez de Mendoza proceeded with more optimism and enthusiasm, with each speaker highlighting the financial gains those in the south of the project zone were benefiting from. Beekeeping making individuals thousands of soles, improved production techniques ensuring better yields and profits for cacao, reforestation promising huge sums of money to secure children’s and grandchildren’s futures.

<sup>66</sup> Reflecting wider and longer-term framings, in which “climate change science has reconceived forests as global lungs, carbon sinks, and an interconnected ecology to be protected and harnessed in climate mitigation and adaptation strategies”. (Devine and Baca 2020: 921)

Each project was presented with promises of large financial rewards in exchange for the agreement to conserve, but non-financial benefits were largely ignored. For example, while the ecological diversity of the area didn't feature, one presenter pointed out the potential tourism that could be attracted if the villagers were able to get a photo of spectacled bears (*tremarctos ornatus*) that are said to make their home in the local mountains. This framing is in line with project goals and documentation: ACOPAGRO, for example, lists as a core goal in its original management plan that "by the end of 2018, the communities directly and indirectly involved in the area [will] know and value the environmental services and the natural wealth of the Martin Sagrado area of conservation" (ACOPAGRO 2013: 27).

A couple of days after the meeting I was able to discuss the project and the future of the communities with one of the attendees, Maria, on the long, 15-hour walk to her home in Canaán. Maria had been working for the project in various formal and informal capacities since its inception in her village, and, after years of conflict and disagreement, felt that it was at an important turning point. Maria explained that most of the community had not considered themselves part of a bigger project, but more in a protracted negotiation with ACOPAGRO, who had seemingly obtained their land without notice eight years prior (Cahuata and Angerand 2014). The meeting was an opportunity to reset this relationship and bring the wealth that the communities in the south were receiving to the northern communities.

After the previous wrangling over what restrictions would be imposed in the area, there was now an agreement that the project would not in fact be focused on this. Maria explained how, by adopting the zonification approach of segregating land for production, protection and living, the community would be able to increase the number of cattle through intensification, generate new income from timber and reforestation and attract tourists to the area. In short, despite Canaán being one of the project areas where deforestation is continuing at a rapid rate, the project would be focused on providing money for reforestation and to help improve the production of milk, cheese and beef. Conservation would be a success thanks to its reframing around these income-generating activities.

The positioning of conservation as 'productive' meant that rather than focusing on restrictions and protection, the project could be promoted by FUNDAVI and ACOPAGRO as strictly win-win – with extrinsic rewards in the form of support for production and

building a timber industry and no need to sacrifice any expansion of activities<sup>67</sup>. The focus on extrinsic motivation is ubiquitous in the project. I regularly asked community members, cacao farmers and local leaders to explain the benefits that came from the work related to Biocorredor Martin Sagrado. It was a question often met with some confusion, as so few felt the direct benefits from the project or saw community-based projects<sup>68</sup>. Instead, conservation was inherently linked to cacao production practices and prices, plantations or other income-generating activities.

The ubiquity of financial incentives in the project highlights how the idea that nature is a service provider that should be paid or compensated for is becoming not simply the best, but the only way to persuade local communities to conserve the forests. As noted in one project document, for example: “[The communities] do not feel that the care of the forests offers great benefits. For this, it is necessary to show through quantifiable indicators that conservation does indeed generate economic benefits” (FUNDAVI 2018: 6). It even has cascading effects for how success is measured, with social impacts mainly based on wages provided by the project, rather than broader measures of satisfaction. As noted in a FUNDAVI annual review:

“The social impact of the REDD+ project is preferably reflected in the pay for technical, intermediate and auxiliary labor; whose salaries have contributed to improve the living standards of the personnel of the concessions directly and indirectly to the populations within the scope of each concession.” (*Ibid.* 68)

This assumption is also reflected by project leaders, with one simply stating that “if the forest isn't linked to an economy, it doesn't make sense” and another going as far as to suggest that needing financial rewards to conserve was in the very national psyche of Peruvians.

While the idea that citizens of the Huayabamba Valley will only respond to financial rewards for conservation is generally accepted by most project workers, this is a slight departure from early project documents which aimed to take a more holistic view of the benefits the project would offer (See Pur Projet. 2012a and also Chapters 3-5 above). Moreover, the history of

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<sup>67</sup> In fact, outside of the geographical limits of the reserve I didn't note a single restriction that was placed on communities. A logging ban was already in effect in the south and no-one spoke of being asked to suppress logging or hunting outside of the core zone.

<sup>68</sup> When I spoke with those who were *not* involved in associations or reforestation projects I was told that there were no benefits at all for the community. This was a source of great frustration for many who wondered where all the money from the project went (see below).

the conservation areas suggests that this has been an evolving process, as much driven by the offer of financial benefits as by the demand for them. Indeed, conservation of the El Breo concession was initiated by local citizens concerned for the state of the local environment, not with a view to gaining financial reward. This was highlighted to me by the REDD+ project leader when discussing the history of the area and how the move to financing the conservation work, while essential, was a gradual process and not the initial impetus for the project:

“Two phenomena happened. Not having money and wanting to protect the forest was the first phenomenon, because they intervened in the timber trade without having anything. And then the second phenomenon happened. The money arrived. There is money to do some activities and they are being paid to conserve. To do the work of patrolling [...] and they became accustomed to this as well. But, even so, if the project hadn't arrived, the money to finance activities, I think around 80% of the people, or 70% would have kept protecting the forest. And some 30% wouldn't do it, as it's only because of an interest in earning... earning an income.”

The phenomenon of financialisation is not unique to the association in question – APROBOC, which runs the El Breo concession – but can be seen in various other groups in San Martín, as part of a wider trend for extrinsic motivations for conservation in the region (Shanee 2013). Various farmers around the region who were not associated directly with the project spoke with me about a desire to conserve with no mention of financial compensation. One farmer who was involved in a newly formed conservation concession, for example, wanted to stop the killing of monkeys, which were being taken from the concession area “by the bagful”. Far from being motivated by any potential earnings, he spoke of wanting support to help counter these activities so the monkeys could flourish.

In this case, while FUNDAVI and Pur had supported the community in founding the concession – and earmarked the land for future carbon credit generation – the local community had been left without any support to register and report the infractions on the land, a process that had gone on for over five years. One community member spoke to me of the frustration that this has caused, reiterating the basic reasons they had wanted to set up the reserve before the associated bureaucracy emerged. He explained how the costs borne from occasional patrols to search for evidence of hunting in the areas most heavily populated by monkeys were paid for by the farmers themselves, each paying ten soles a month as “there isn't support from anyone”.



While the financial and utilitarian focus seems pragmatic and considered, this frustration shows the intrinsic motivations the project may be ignoring and the uneasy relationship that extrinsic motivations have created. They have also begun to dictate project goals and practice as this chapter now moves on to show.

## Carbon Conservation

On my first visit to the FUNDAVI head office in Juanjuí in mid-2017, I was impressed by how well funded the project seemed. The Biocorredor Martín Sagrado project appeared very organised, with neat branding, admin staff, models of agroforestry systems and awards on display. This section explores how this outward facing professionalism obscures the challenges facing the proactive conservation work on the ground, as the focus on trees, timber and carbon – the financial and productive aspects of the project – overshadow patrols and attention to biodiversity within the concessions.

The actual time spent on ‘control and vigilance’ by workers varies greatly between the individual associations that own the concessions<sup>69</sup> with one group in particular leading on the bulk of the patrols. For this reason I spent a series of months with this group – joining them in meetings, following the administrative requirements they had to complete and accompanying them on patrol – to understand the technical aspects of the project and the challenges the team faced in delivering high quality conservation work.

In the field, budgets are strained, and patrols and monitoring of the conservation area (falling under the bracket of ‘control and vigilance’ locally) had to compete for attention with the many meetings, reports and other responsibilities of the project workers. As noted in Chapter 4, the formalisation and expansion of the project accounts for the largest spend on the project and project workers – from FUNDAVI, the associations and forest *custodios* (forest patrol staff, recognised as responsible for the surveillance work by the regional government) – highlighted the tension between the work required to manage and expand the REDD+ project and assigning budget, time and focus to support comprehensive investigations and patrol. The project lead from FUNDAVI highlighted the number of

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<sup>69</sup> One association registered its sole achievement in the category of control and vigilance in 2017 as three signs (FUNDAVI 2018)

meetings and official visits that had to be coordinated and complained of having weeks of back to back visits, where they would have to introduce the project, provide support and prepare locals to receive guests, and to ensure boats were available or project boats could be used for pick ups and drop offs up the river. They referred to this – the biggest drain on their and other senior project workers time – as ‘dead time’:

“There are so many meetings that are dead time. Many people arrive at the office and [...] there's always meetings and coordination. Meetings, coordination, trips to Amazonas. Even a little bit of this work takes up lots of my time, like, I don't – I can't – make it to the field much at the moment.”

As such, in contrast to my initial impressions of FUNDAVI, reaching control posts and field offices often highlighted a lack of organisation and planning in control and vigilance processes. There was little strategic planning, no maps of the area with zoning to assist with the effective rotation of patrol routes and little in the way of reports of wildlife within the concession. One concession's head of conservation, Juan, reflected on this at length and highlighted the lack of time and funding available to formulate a more comprehensive strategy. Juan wanted to spend a week at a control post – working on patrols and ensuring they were working more efficiently – but said that this was impossible, due to the wealth of other commitments and meetings he had. Thanks to the need to deal with all the requests regarding the project, he said he was unable to live without phone reception for more than a couple of days at a time.

While the project has made a commitment to provide support for conservation work, even FUNDAVI's (2018: 24) internal documents highlight the inefficiency of these patrols, criticisms which were discussed freely in the project's annual general meeting in 2019. This can be exemplified with a specific patrolling trip taken by the forest *custodios*. The goal of the trip was to survey a lesser-visited area of the concession for signs of illegal incursions and to install basic facilities (chiefly running water) to allow for future patrols. Going upriver I asked about the fauna of the area we were entering and the challenges with patrolling it, but rather than discussing the signs of biodiversity or routes for logging, the guards talked about potential spots to bring tourists and the diversity of trees and their relative value as timber.

The shallow nature of the conservation work was also reflected in the vague goals and reporting required, both in local activity summaries and the chains of feedback to FUNDAVI

and Pur. The patrol summaries highlighted items such as the spotting of a butterfly or bird, without names of species or locations, rather than offering any insight on areas of biodiversity or human activity. The one endangered animal we did encounter – a margay (*Leopardus wiedii*) which had to be rescued from the notoriously fast-flowing Huayabamba river following heavy rain – was erroneously recorded as a jaguar (*‘otorongo’*) in the internal reports. This incorrect sighting then found its way into official documents that were to be fed back to Paris, providing ‘proof’ of both the quality of the patrols and the diversity of the area.

I spent one patrol picking up empty shotgun shells along a new path that we were opening up through the forest – the varying deterioration of the shells suggesting weeks of hunting activity within the concession. However, when I suggested we mark where they were found to track potential routes of poachers there was little agreement of where this could be done or what purpose it would serve. The idea of monitoring or counteracting poaching was second to the search for potential tourist spots that could be established and beyond the ineffective and poorly understood formal denunciation processes (see Shanee et al. 2020) there was no effective recording of issues.



**Images 6.3** Empty shotgun shells collected on a patrol. The differing deterioration of the metal suggests these have been left for different lengths of time

Turning a blind eye to problems in this way was also reflected in the approach to the illegal logging which takes place on the river. Of the many times I pointed out evidence of logging and people transporting illegal timber to project leaders I was told that “it happens” and that there was “nothing we could do”. Furthermore, project leaders from Pur Projet later pointed out that such an antagonistic approach, such as trying to confront the illegal logging in the area, carried a high risk for *custodios* and for Pur “being rejected as project developers if [they] start to act like policemen as well”.

I discussed how the limited conservation budgets and vague goals affected the patrols with Peter, a *custodio* working on the project. Peter explained to me that, despite claims from senior leaders that the team covered a wide area around the concessions, over the previous year they had focused on just two routes on the edge of the concessions. He explained that this was due to the difficulty of rotating staff to ensure that there were sufficient numbers to conduct patrols and monitor the guard posts at the same time, often leaving one member to patrol on their own. In the northern concession of Martin Sagrado this is an even greater problem, in 2018, there were no patrols at all and no trained *custodios* within the concession area<sup>70</sup>, despite it being a key area of ongoing deforestation (a problem that the team was addressing in 2019).

During an interview discussing the various aspects of the project, one head of conservation argued that patrolling is the “easy” part of their work, but this belies the challenge of delivering quality observatory work and the value it can bring. The difference between patrols in the concessions with those in the adjacent Rio Abiseo National Park was highlighted by a state-employed guard for the national park, who discussed the degree of knowledge needed to effectively register biodiversity or to spot and combat illicit activity. Running through photos from the morning patrol, the guard was able to highlight the signs of animal activity in certain areas, the wealth of biodiversity that could be registered through long, careful observations and the subtle indicators that humans had used paths (in one case by the specific way a type of fruit is discarded that indicates human over animal consumption) to search for high-value timber species or animals to hunt. The guard went on to explain the mixture of passion for nature, resources and training that had helped him build his knowledge and, of these, highlighted the lack of training that the *custodios* had received as a particular issue. One

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<sup>70</sup> The only trained *custodios* were located in the south of the project zone, working on rotation with the other groups and only giving them access to the southern portion of the Martin Sagrado concession.

head of conservation reiterated this fact complaining that his team wasn't equipped to effectively monitor the area, with a particular weakness in the area of biodiversity knowledge.

Peter had received little training, as with most of his fellow *custodios*, and was keen to learn more about biodiversity and how to conduct more comprehensive and professional patrols. Serving as a guide for tourists and extremely knowledgeable in the land, it is perhaps surprising that the project has not invested in his development, yet he told me the only training he had received was in the potential value of medicinal plants. In interviews and conversations other members mentioned a desire to gain new skills and specialisms, but felt that they had not had the opportunity.

The lack of investment in building local skills outside of reforestation and production techniques seems in contrast to the broader goals of the project and is highlighted by the composition of the core project team. Indeed, of the experts involved in the Biocorredor Martin Sagrado project, most come from a background of forestry. As one informant commented on the initial set up of the El Breo Conservation Concession:

“We needed a professional. An expert who could help with the management of everything. An engineer. The first engineer's experience was that he'd worked in ARA<sup>71</sup> in the area of concessions, but not conservation, not forests (*bosques*)! He understood forestry (*forestería*) and the exploitation of forests<sup>72</sup>.”

This lack of experts with relevant knowledge of ecology, ecosystems or biodiversity – as opposed to forestry and the timber trade – was highlighted to me on multiple occasions, by often-exasperated project workers and third parties. One head of conservation made it clear that it was a particular hindrance for patrols and that he lacked the team to deliver effective surveillance work, stating simply that “if we had a more professional team, by area, it would be much better. The project would be much better”.

This participant was referring in particular to the current team of another local conservation group. This group's project team includes a diverse group of biologists (in fact, the only biologists I met in my entire time working on the project), forestry experts, conservationists, economists and more, and are still relied on for their expertise on technical issues in

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<sup>71</sup> The regional environmental authority: *Autoridad Regional Ambiental* in Spanish

<sup>72</sup> The difference between *forestería* (forestry) and *bosques* (forests) is more pronounced in the original Spanish.

Biocorredor Martin Sagrado, such as GIS mapping, new concession proposals and drone photography. They also maintain close ties to the associations, having assisted them with the original El Breo proposal. As he continued:

"[That group] and FUNDAVI are incomparable. [They] have a very good technical team with technical personnel in each area of the organisation. The conservation part of the group isn't mixed with the area of, say, green economies. Each person is in their field, in their branch, in their area [...] And FUNDAVI, doesn't have a technical team that only works on this and nothing else. There's [*the project leader*]. Nobody else!"

This narrow focus is reflected not just in the day-to-day work in the valley and the composition of the technical team, but also in the types of scientific studies and investigations conducted in the concessions. When comparing management plans to outcomes, plans for annual socioeconomic studies, lists of bird species or other investigations into flora and fauna have failed to materialise, while inventories of valuable types of timber, soil studies to test sequestration and, of course, the carbon stocks have taken place. While a major biodiversity study was being planned in 2019 – it was notably with an explicit focus on valuing the biodiversity in financial terms – this reveals a clear prioritisation. One head of conservation, for example, claimed that they needed additional support (beyond that provided by REDD+) to conduct work in biodiversity, but that studies of timber were critical for the success of the project.

The recurring theme of the conservation work was that patrols were an essential part of the work, but could be underfunded and deprioritised in terms of skills required and time assigned in favour of the diplomatic work of explaining and expanding the ambit of the project and pursuing the profitable aspects of the work such as reforestation. FUNDAVI's analysis now explicitly links conservation success to the need to protect *carbon* in the project, not forests, well-being, wildlife and biodiversity or any of the other benefits which could be part of conservation work and are listed as supplementary goals in international verification (FUNDAVI 2018: 21-22). Or, as one conservation lead highlighted with regards to the ever-increasing focus on the reforestation projects: "Everything is reforestation for the foundation. I think it's Pur's business! It's everything [for them], right?"

As with the section above, this highlights a narrowing of goals in the project. Despite original plans to realign the local economy and ecology (see Chapter 3), trees – particularly those that have value on carbon and timber markets – have become the all-important feature of

landscapes. This chapter now moves on to show how this realigning of value in the local landscape is reflected within local communities.

## Conservation in the Community

On my first visit to one of the villages on the Huayabamba river, I was given a tour by one of the members of the local cacao association, Eduardo. Having explained my research and asked to see what conservation work was being done, he was keen to show the various projects under the remit of Pur Projet and a Swiss / Peruvian cacao producing cooperative. Our walk took in various sites: areas of cacao plantations, a (failed) fish farm and a plantation of *capirona* (a rapid-growth tree species favoured by farmers in most reforestation projects in the valley, see Chapter 5). When I discussed the project and where the conservation work happens with Eduardo<sup>73</sup>, the focus for him was on the production of timber or cacao.

The walk continued and on requesting to see some of the forest (*'bosque'*) I was taken to another vast plantation of *capirona*, interspersed with very few other species of tree and with patchy undergrowth. While I grew used to the eerie quietness of the cacao plots and plantations – with the silence only broken by downpours of rain or the sound of trimmers, chainsaws or passing mototaxis – the sheer lack of life in these new forests was striking on first impressions. The trees were planted in uniform rows and the long bare trunks of the *capirona* provided no habitat for local birdlife, which was normally so abundant in the forests of the valley. The soil was dry and tough to break by hand, with little sign of insect life above or below it. I asked Eduardo about the biodiversity of the area and he began listing the impressive diversity of timber (*'madera'*) that was available from the plantations, botanical garden and wider forests. When pressed on whether there were any areas that weren't being used for production, but simply for protection, he explained that the community was seeking its own area of conservation, with a view to attracting tourists to the village.

My tour of the village concluded with another cacao farmer, Julián, taking me to his newly cleared plot on the side of a large hill, ready for planting a new *capirona* plantation. As we climbed up the land, with all vegetation cut back and then burned to clear the early growth and prepare the soil, Julián explained that in a few short years the area would be a profitable

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<sup>73</sup> Notably, bringing my own conception of what I expected of this work.

and beautiful plantation. As we sat overlooking the village and the wider valley, he pointed to one of the overgrown areas to the bottom of his parcel of land and explained the process of clearing such land as he had the very patch on which we were sitting. In contrast to his great pride in the reforestation plots, the weedy growth of returning forest was deemed ugly and worthless.

This was a subtle use of language replicated by many other community members in the villages in the valley. When I highlighted the diversity of shrubby areas growing back naturally and slowly, I was told they were ‘poor’ – when I enquired about areas that looked particularly dense and interesting, I was told they were worthless, as there was no timber species present<sup>74</sup> – or needed to be turned into plantations. When I asked a local farmer in another village how I could reach the dense forest he told me I shouldn’t bother as the uncultivated forest was ‘poor’ and that I should go to one of the plantations nearer the river’s edge. In another village, when I asked a cacao farmer to show me any spots where there had been monkey sightings in the area, he insisted instead on taking me to see the largest *capiroña* grown by the community.

Thanks to the work of reforestation, there was also a blending between the terms ‘*bosque*’ (forest) and ‘*plantaciones*’ (plantations). The word for trees (*arboles*) – was rarely used over timber (*madera*). While regional leaders highlighted the difference between these terms to me in interviews, at a local level the distinction was lost. The plantations were a source of pride, and the seemingly unproductive forest seen simply as waste. This emphasis on managed forests was even reflected on trips in the centre of the conservation concession. As we walked past a slight clearing where the forest was reclaiming an old plot which was used for growing coca, one project worker suggested to me that they should reforest the already recovering jungle. On suggesting that the forest was recovering on its own with dense foliage – and in doing so might produce some unique habitat for local biodiversity – they told me that we can speed this process along with *capiroña*. Produced landscapes were seen as preferable to wild.

This, however, is not to suggest that farming and biodiversity are incompatible, far from it, but to highlight something about the effect of the style of production on the local ecosystem. In another part of San Martín I visited a project with similar aims to Pur Projet – stimulating

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<sup>74</sup> Literally, “This forest is poor, there’s no timber” (“*es pobre este bosque, no hay madera*”)



local production on degraded lands to ease pressure on forests – but completely different methods, focused on using biochar to grow a mega-diversity of crops largely for self-consumption. While in the Huayabamba Valley I could barely break the soil underneath most cacao plots and plantations and rarely saw any insects or birdlife, the alternative approach yielded rich loam teeming with insects, encouraging some of the most diverse bat and birdlife I saw in the region, and occasional monkey and mammal visits.

Whether or not such an approach is feasible across the vast scale of Biocorredor Martin Sagrado is debatable, but it is used here merely to highlight the impact farming systems and reforestation are having on local landscapes. This is reinforced in multiple spaces in the project. In 2019 a ‘forest school’ was being designed to teach local farmers, school children and visiting dignitaries the ‘value of the forest.’ It was to include the various productive zones of the ‘forest’: from agroforestry to reforestation plantations and botanical gardens for producing traditional medicines<sup>75</sup>. Thus, while initial plans may have framed reforestation and agroforestry as a useful way to fund and support conservation work, the generation of exchange value in the natural world has become central to the work itself and is increasingly seen as an entrepreneurial endeavour. As one member of farmer told me:

“So, that's why to those who are reforesting, I say, don't look at it simply as reforestation, look at it as a business. Because it is a business. Because you are sowing to harvest. It's a business.”

This places reforestation projects not just at the core of the local economy, but also of conservation, as these two worlds are combined in the assumption that the goals are commensurable. One leader spoke of the goal of the conservation work as ensuring life in the valley was: “not just destroying and felling, but also reforesting. For one plant that you chop down, plant double or triple”. However, where incentives lie in rewarding more carbon, more trees and more productivity there is a danger that plantations replace forests and biodiversity becomes an afterthought.

The significance of this is hard to grasp on short visits to the project zone or when caught up in the day-to-day work of meetings and admin, but as the view of the natural world slowly changes so does the landscape itself. This chapter now moves on to assess the long-term

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<sup>75</sup> There is a French company that commercialises many of these products in local Tarapoto.

effects of this approach to the stated goals of the project and the wider ecology of the Huayabamba Valley.

## Conservation Outcomes

Having now explored both the land-sparing strategy that the work of Pur Projet is based on in Chapter 5 and, here, the implications for conservation work, this chapter can now explore some of the outcomes of this approach.

The success of land-sparing is based on the assumption that the project will allow for the expansion of agriculture to ensure a lower pressure on the surrounding forest while building a longer-term respect for the natural world in those that take part. For this logic to be successful, it would need to be reducing deforestation, delivering financial benefits and ensuring local practice prioritises long-term sustainability.

The project has indeed delivered on each of these goals and reports and verification detail their achievements. Here, building on the evidence above, however, these three elements will be explored in greater detail – in both quantitative and qualitative aspects – to assess what may be left out of current calculations thanks to the logic inherent to REDD+ schemes.

### Reducing deforestation

While deforestation is indeed happening at a reduced rate *within the concession area*, for the offset logic to be effective deforestation would also need to be falling in the buffer zone and beyond (or offset by the pace of reforestation), thus proving the new approach to farming and production is leading to a net decrease in pressure on the forests. Beyond the core concession area, however, analysis of deforestation is weak or non-existent. As detailed throughout this chapter (and the last), project time, money and effort is focused on the productive aspects of the project, to the detriment of focus on countering deforestation and working on non-extractive alternatives.

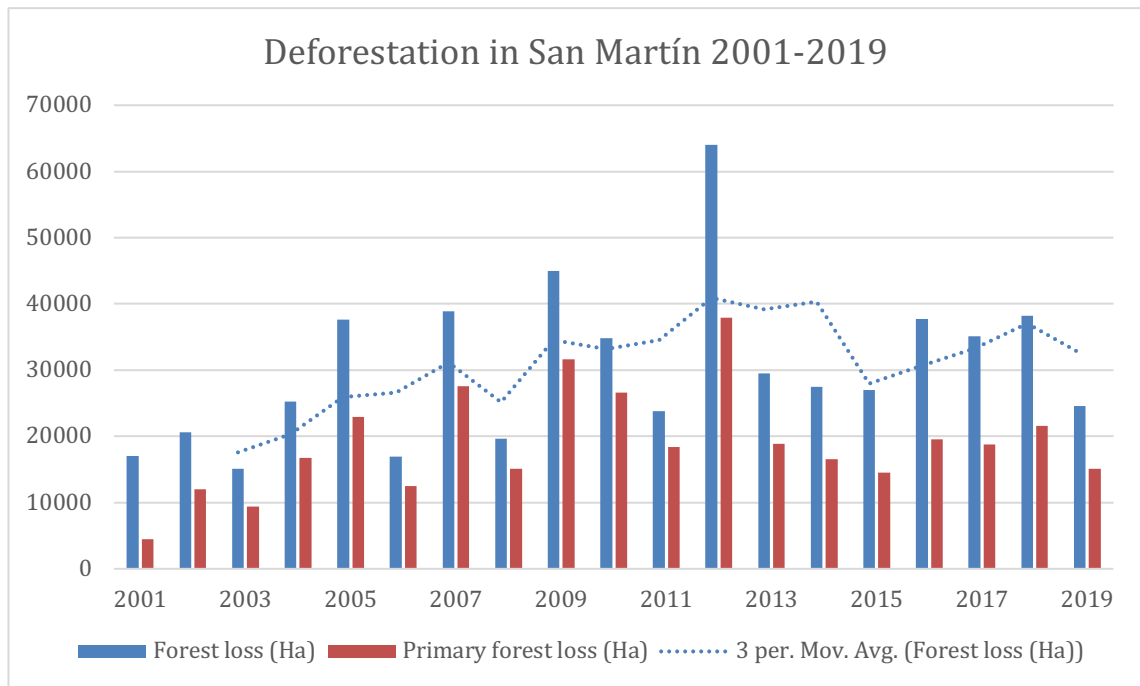
Investigations into project leakage are conducted every five years in accordance with the verification periods but only include certain buffer areas, not the wider valley that deforestation may be displaced to. One project leader confirmed that they didn't consider

any of the area outside of the core concession zone when analysing deforestation and the head of FUNDAVI simply stated it is outside of their area of interest.

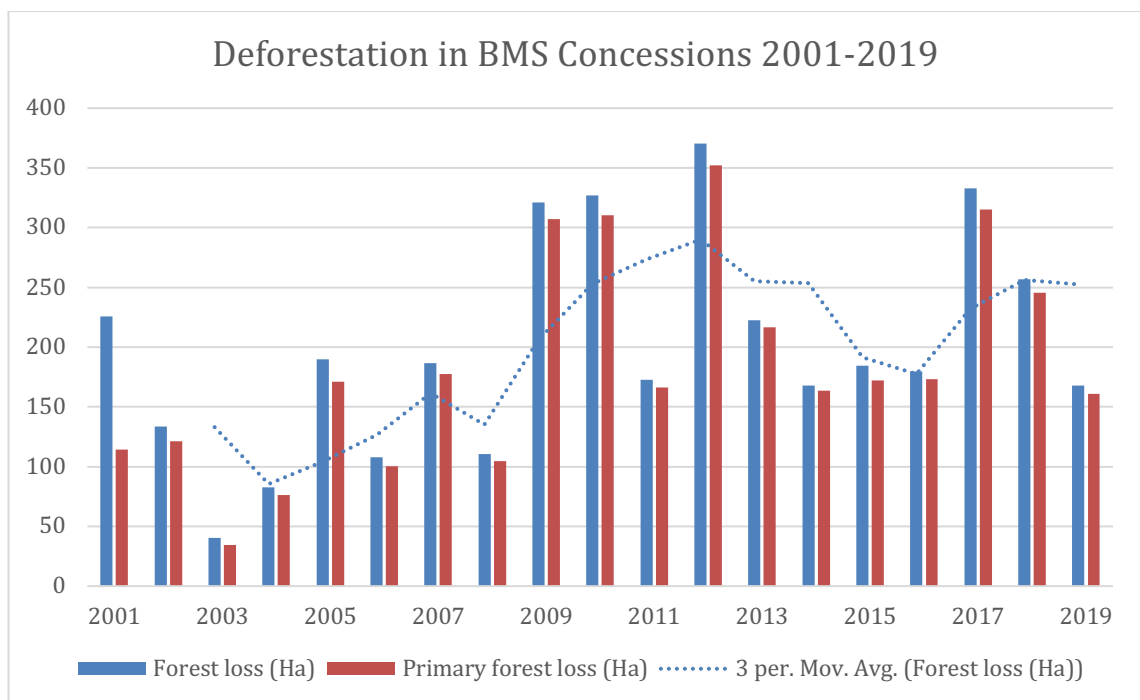
Analysis of satellite images through the Global Forest Watch system, suggest that deforestation is steadily rising both within the concessions and across the Biosphere Reserve Gran Pajatén as a whole. Focusing on the area surrounding the communities in the southern part of the REDD+ project, however, shows a sharper rise in deforestation – and not insignificantly, more than doubling from an average of 366 hectares a year from 2001-7 (pre-project) to 933 hectares a year from 2008 to 2019 (see Figures 6.1-6.4).

Although it may seem counter-intuitive, this is not entirely problematic for the project, as the rate of deforestation in the core zone and buffer area is growing at a slower pace than baseline predictions, and thus generating carbon credits. Moreover, the argument could be made that the sharp increase from 2008 was the likely trajectory of deforestation without the project, with the modest decreases since 2017 as a result of the project. Such nuance is lost in reporting of the project and the high rates of deforestation raise questions regarding the impact of the REDD+ work in the very area in which efforts have been most concentrated.

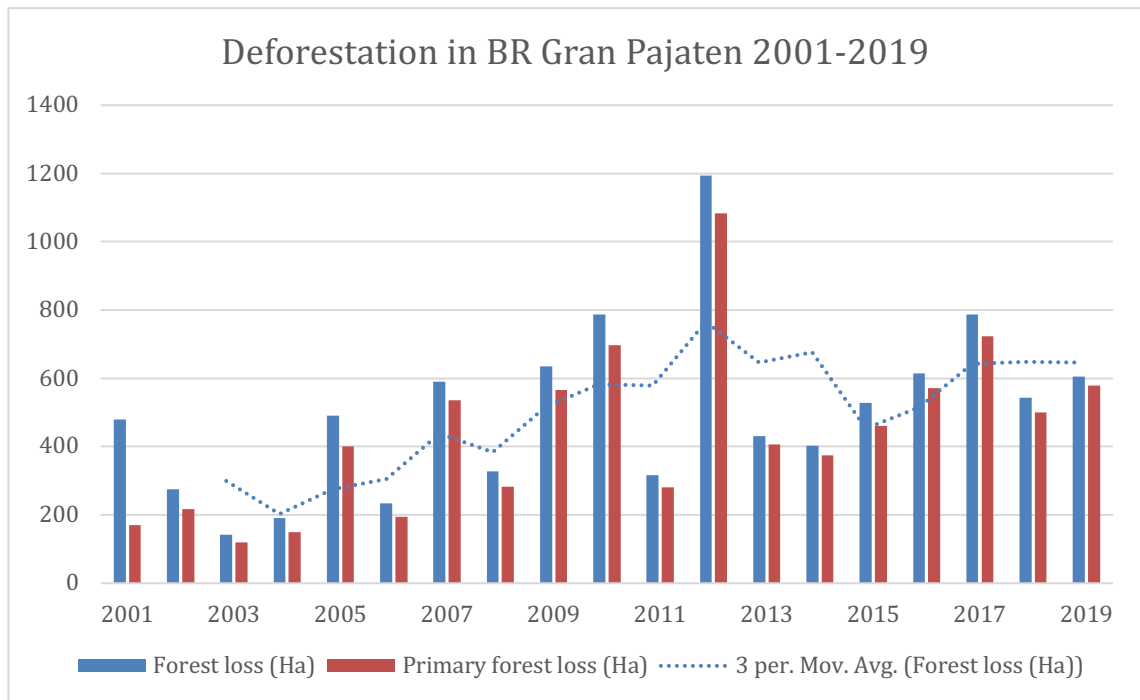
Despite the ongoing illegal activity and deforestation being acknowledged in some internal documents (FUNDAVI 2018), it was perhaps the most taboo subject I encountered on fieldwork. Senior project workers often looked frustrated when I pointed these issues out and, despite many admitting that they had expected that deforestation was indeed rising in the valley, were keen to divert my attention to positive stories from their work such as the income streams and number of carbon credits generated. Perhaps the most telling response was from a project lead, who said they not only felt that they hadn't stemmed deforestation in the valley, but potentially encouraged it. They did not consider this a disaster and argued that migration was likely to increase deforestation anyway and that, on balance, the project protected the core area, was providing more financial benefits and promised big things for the future through the reforestation schemes and the timber market.



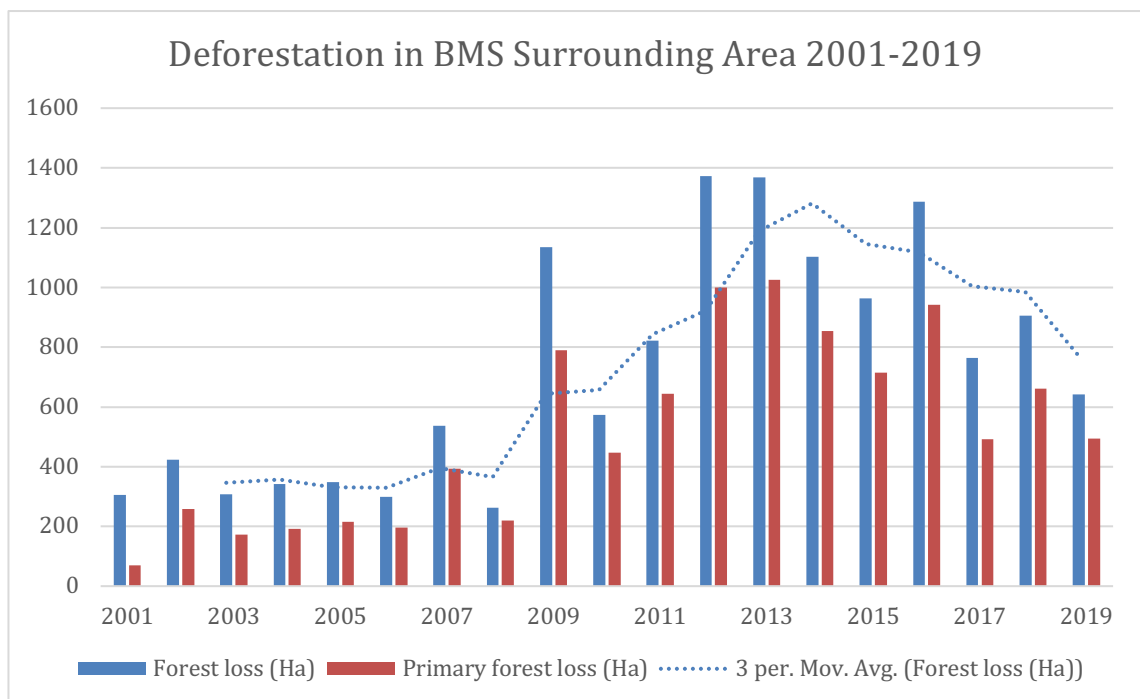
**Figure 6.1** Deforestation in San Martín 2001-2019, Source: Global Forest Watch, <https://www.globalforestwatch.org> [Accessed 20 October 2020]



**Figure 6.2** Deforestation within the Biocorredor Martín Sagrado REDD+ Project concessions 2001-2019, Source: Global Forest Watch, <https://www.globalforestwatch.org> [Accessed 20 October 2020]



**Figure 6.3** Deforestation within the Biosphere Reserve Gran Pajaten 2001-2019, Source: Global Forest Watch, <https://www.globalforestwatch.org> [Accessed 20 October 2020]



**Figure 6.4** Deforestation in the communities surrounding the Biocorredor Martin Sagrado REDD+ Project 2001-2019, Source: Global Forest Watch, <https://www.globalforestwatch.org> [Accessed 20 October 2020]

## Delivering financial benefits

Reforestation does represent a promising market in the valley – and is being enthusiastically adopted by many – but the resultant reframing of forests as plantations and trees as timber could have numerous long-term impacts. The narrative has had the dual effect of heightening the expectations people have of the financial benefits that the project should be generating and stirring up local discontent as to where this money goes, especially given the paucity of tangible benefits for community members. As one local farmer explained to me:

“I imagine that there are countries that invest, NGOs that invest millions, as they say. But it passes us by, it's over in other places, and it stays there, it's administration, but it doesn't reach the field. Or say, say 0.5%. So, the farmers that you see, do they see benefit? [...] No, there is no benefit.”

Another farmer spoke to me about the ‘millions of soles’<sup>76</sup> he had been told he would make from reforestation, only to find out he couldn’t transport the timber and his plot was worth very little. He went on to say that he now wouldn’t speak to the Pur Projet team without other representation, to help temper expectations. A representative of the Peruvian forestry service, SERFOR, said that this was a story he had seen repeated with many frustrated farmers throughout the valley who had expected to make millions. Even senior figures within the project question the motives of Pur Projet:

“At the bottom of this, though, we don’t know what [Pur Projet’s] intentions are [...] Maybe they’re just working in their own interests and talking about conservation is just rhetoric, just a smoke screen, so to speak. But deep down we don’t know.”

Claims of corruption were commonplace in all interviews conducted. During fieldwork, it seemed everyone was subject to an accusation of corruption at some point, communities accused the regional government, farmers in one village accused ACOPAGRO, farmers in another accused APROBOC, some association members accused FUNDAVI.

While it would be easy to downplay these accusations, it has created an atmosphere of distrust in which the constant promotion of extrinsic rewards has the potential to cause conflict. This

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<sup>76</sup> Mathematically, this does seem possible from Pur’s original calculations. Income from timber was expected to be \$450-10,500 per hectare. At the top end of this estimate, based on rough exchange rates you would need 30 hectares to earn one million soles a year.

is exacerbated by the system of seniority and rewards that has dictated who has access to the potential benefits generated by the project. This access, as has been noted above is limited, making the conservation work the preserve of a distinct local elite, which has at times further stoked up tensions in some communities. One association leader explained to me how this has even resulted in theft and violent confrontations opposing those in charge at a local level. Another recent hire in the project – a natural resources specialist – reflected my own surprise at the anger from many local farmers towards the project, as they discussed the perceived lack of benefits and rumours of embezzled money.

This has led to a degree of disillusionment around the project, one that risks being heightened as it fails to deliver the sort of infrastructure and social benefits that communities desire: such as healthcare, education and utilities. This was described to me by one elderly resident at length, who said that while the project had made many gains in persuading people to plant trees, it didn't appreciate that the needs of the local community were common and couldn't be solved with wages. A local mayor explained further how frustration had been growing due to the ever increasing amounts of money the project seemed to be generating but the lack of any tangible public benefits. Various members of one community explained that they wanted to focus efforts on longer-term plans or development projects, such as a new clean water system that had been in planning for many years but was yet to come to fruition.

Despite the frustrations, the evidence above shows not just the potential outcomes of the focus on extrinsic motivations, but also how such an approach can take on a life of its own in the field. While Pur did not aim to foreground a financial approach, little-by-little this is what has been reinforced within the project to gain buy in from communities, with presentations which highlight, slide after slide, the enormous profits potentially on offer for honey production, fish farming and, of course, timber.

### **Creating environmental subjects**

Beyond the basic project indicators, the wider communities that are targeted with workshops and signage around the valley don't necessarily act in ways that the project considers more 'sustainable' or 'green'. The association leader in one village, Diego, explained this as 'a lack of local environmental consciousness' to me one evening. In particular, we discussed the recycling bins in the village, located in the community's central square.

The bins were installed to help local people separate rubbish and consider their use of various materials, sparking a wider awareness not to throw litter such as food wrappers and drink bottles on the floor, they were also a statement that the village was ecologically aware. However, a few years on, the bins were poorly maintained and often not used, much less with recycling rubbish separated. The following day I took part in the regular litter picking activity organised by the association, collecting rubbish from around the village and tidying the main square with local schoolchildren. As I separated the rubbish another association member approached me and told me not to bother as, despite the bins, the waste all went to the same landfill site outside of the village, where it would be buried or burned.

What at first seemed like a frustrating inability to secure local buy in for a project with well-defined goals, proved to be an illogical idea that had more to do with aesthetics than actually changing practices. Despite this, the bins can be considered a delivered project in internal records, registered in project feedback meetings and look impressive in international verification.

Similar contradictions were pointed out to me on various occasions in the villages, with different villagers having their own frustrations: Weedkiller is used around villages to clear anything green, new strimmers are being used to clear land quickly (at the expense of insects and other biodiversity), firewood is driven around town by motos, streams are surrounded by rubbish with pigs housed right next to ones used for cleaning clothes and washing, and many children spend their days shooting the diverse birdlife around the area. Even the strictest rules are interpreted as certain groups see fit. In my time with one association, members had to be rebuked in a meeting by the association and conservation leads as an unidentified group of forest custodios were alleged to have killed and eaten wild animals from the reserve at one of the guard posts.

Listing supposedly ‘ungreen’ behaviour here is not meant to provide an unsympathetic appraisal of environmental credentials – indeed, many are common in Peru and beyond – but to highlight the difference between the rhetoric of carbon credits from reforestation and conservation and local reality. While certain actions continue at the expense of the natural world the discourse of conservation has defined new ways in which people are ‘green’ specifically through reforestation and agroforestry.



## What is a Conservation Project?

This chapter has thus far shown what constitutes a conservation project in the context of the Huayabamba Valley, and more broadly in the context of a REDD+ project which seeks to maximise the exchange-value of landscapes to provide for their long-term preservation. Rather than originating from an attempt dictated from above to make as much money as possible from the project, the evidence provided above suggests that rewards, work and socionatural relations are being coproduced through subtle processes of compromise and coherence with local actors.

This section will summarise three of these shifts: how extrinsic motivations are ‘crowding out’ intrinsic, how carbon preservation ceases being a proxy for more holistic benefits and becomes a goal in itself, rendering biodiversity increasingly irrelevant, and how the new regimes of value are creating geographies of wildness and waste outside of the neat plantations and plots of the official project.

### Crowding out

The structure of the project is based on the premise that people will only respond to financial incentives. The assumption here is that to ensure conservation, people need extrinsic motivation and pursuing any sort of intrinsic motivation – that the trees, biodiversity and wider natural world have value beyond providing services (use value-rather than exchange-value) – is doomed to failure.

As such, instead of nurturing the intrinsic motivations of groups such as APROBOC who originally sought to conserve the area without desire for financial reward, the project has increasingly focused on extrinsic motivations, reframing conservation as agroforestry and reforestation. This is seen as a means to an end – a short-cut to provide incentives that will eventually lead to ‘better’ environmental outcomes – but as various groups have been drawn into international flows of carbon, the logic of financialisation and the need for extrinsic motivation has crept ever more into assumptions.

This has been a slow process and one that appears to be ‘crowding out’ other approaches to supporting and inspiring conservation. As noted by Agrawal and colleagues (2015), where

extrinsic motivation is offered for projects, it becomes harder to engage people by other means (see also Chambers et al. 2019). The arguments presented here suggest that the idea that conservation should be delivering financial benefits has become subtly more important in the Huayabamba Valley, to the point where it is now an assumed truth. While this may not have been the goal of REDD+ – or Pur Projet – it does appear to have become a self-fulfilling prophecy as local people and the project leads increasingly promote and request financial rewards for conservation work.

While Biocorredor Martin Sagrado seems to offer a clear case of this, it was an issue that was highlighted by multiple different groups around the San Martín region. One conservation NGO leader explained how the financial approach to conservation had slowly begun to dominate the discourse of the area. Another, in uncritical terms, explained how, purely in a logical progression of what was deemed successful, they had become increasingly focused on financial rewards and ‘productive’ economy-based projects, to the point where most conservation project proposals were 80% focused on the local economy. It is even reflected in the changing focus of REDD+, as noted by the Deputy Director of the UN’s Green Climate Fund, Juan Chang (in Clouse 2020), from “a compensation mechanism that pays for not cutting down forests,” to funding “a transition toward resilient and low-emissions development”.

The move to extrinsic motivations and the search for exchange value – to return to the key theoretical thrust of this chapter – has put an enormous strain on those who wanted to achieve conservation goals, and instead find themselves working on administration and meetings with patrols and proactive control work underfunded. Indeed, when taking leakage into consideration, even by the limited goals of reducing net deforestation this logic appears to be failing in the case of the Huayabamba Valley, despite its success in the metrics of profitability and carbon sequestration in core project zones. Furthermore, extrinsic motivations in the case of the Biocorredor Martin Sagrado REDD+ Project are aimed at individuals or via producer associations, reaching only a select number of people in the valley. As noted of other conservation and development projects in San Martín, “projects that tried to alleviate poverty to incentivize conservation tended to attract farmers who were wealthier and more interested in farm development than conservation, regardless of whether environmental messages were included” (Chambers et al. 2019:21). Participants in these schemes are often those with money to invest in reforestation, rather than those whom the

project may be aiming to target to change environmental behaviour such as farmers involved in illicit logging.

Perhaps more concerningly from a deforestation perspective, it appears that the promise of major financial windfalls from the project are attracting more people to the region, and if the project can't deliver – as it has so far failed to do for those who expected 'millions' from reforestation – the less impressive reality is likely to lead to deforestation in neighbouring areas. Such evidence suggests that the assumption that productivity gains from land-sparing will compensate farmers and discourage them from continued expansion is erroneous and resonates with evidence from San Martín that in fact “more deforestation leads to more wealth, which in turn facilitates more deforestation” (Chambers et al. 2019:22). These obscured impacts of the project are also reflected in what the project metrics miss in terms of biodiversity.

### **Goal displacement**

Carbon is the main source of funding for the Biocorredor Martín Sagrado project and, as such, with regards to targets and measures of project success, nothing is as important as carbon stocks in ensuring profitability. While in project documentation, carbon simply stands as a proxy for conservation, it can become central to markers of success regardless of whether this contradicts lived experience on the ground. As noted by one project leader from FUNDAVI: “The projects have a problem. They concentrate on the results and the social aspects, the sense of harmony, is lost in the search to capture more carbon credits. To generate carbon credits, right”.

The focus on metrics of success – and the alienating effects of a never-ceasing focus on numbers and targets over complex real world outcomes – is no local phenomenon, but reflects a global trend in the increasing importance, even dominance, of metrics and quantifiability of goals in conservation projects worldwide (Youatt 2008, Fletcher 2010, Turnhout et al. 2014) and, indeed, in other sectors (Muller 2018). REDD+ itself is a radical simplification and could be considered a misdirection of purpose, where a desire to offer quantifiable results (tCO<sub>2</sub>e through the limiting of deforestation or replanting in demarcated plots) obscures true goals (halting global deforestation and protecting biodiversity).

This effect has been termed ‘goal displacement’, where activity focuses on the metric, rather than the object it is meant to stand as a proxy for. This has a range of implications explored at length elsewhere (*ibid*), but particularly cogent here are its tendency to direct resources to specific areas of work, the alienating nature of chasing figures that contradict lived experience and the increasing cost in time and finances on administrative (and verification-based) tasks (*ibid*) – or ‘dead time’.

Scholars have shown that carbon-focused conservation is at times inconsistent with broader biodiversity or deforestation goals (Ferreira et al. 2018, Holl and Brancalion 2020) and reforestation provides equally mixed evidence of biodiversity benefits (see, for example, Osborne 2015). In Biocorredor Martin Sagrado and the Huayabamba valley this is compounded by goal displacement and the fact that very little time can be dedicated to monitoring biodiversity or building the skills of local actors to understand the local flora and fauna. While endangered and charismatic animals are sought for their value in marketing the success of the area, knowledge of biodiversity is almost irrelevant to project. While the observations presented here on the low quality of the soil and absence of fauna in plantations offer an indication of the state of the local ecosystems, they are no replacement for specific research on this topic.

These outcomes cast a serious shadow on the positive stories told around Biocorredor Martin Sagrado and leave the project open to the criticism that what has been created are mere ‘paper parks’ – where land is demarcated and listed as protected, but without any serious system of patrolling (Perfecto et al. 2009). Taken as a snapshot, this indeed may appear to be the case, but it must be remembered that this is still a nascent project (10 years into an 80-year commitment) and plans to expand and improve conservation practice should not be dismissed. It does however highlight how these schemes can be set up with a minimal degree of proactive conservation work, with carbon the only real test of success. Beyond metrics and patrols however is another subtle shift that this approach is causing in how people view and interact with the natural world.

## Geographies of waste and profitability

The focus on generating exchange-value has created emerging geographies of waste and profitability in the region, particularly with regards to reforestation. Potential financial value is now seen in areas such as weedy shrubland that can be converted into plantations or in hilly terrain unsuitable for cacao, but potentially attractive to tourists. Locally, the impression of what is weedy and wasted and what is productive in San Martín is reflected in peoples' changing views towards the forest. From the way people clear weedy and unproductive land to grow densely packed tree plantations to how conversations centre around timber, not trees. Again, reforestation and productivity lies at the heart of this – dictating what will be valuable and what is superfluous, and creating a starker divide between 'cultivated' and 'wild' (see Tsing 2005).

There has been a subtle change, in turn, in how people see plantations and production as natural; in its aesthetics. Something which is reinforced by the many foreign visitors to the area. It is no accident that the resulting landscapes of productive, profitable and green terrain meets the ideology of those structuring the projects. There is a clear discord here between what might be considered reforestation in international forums and in the discourse of offsetting, namely that consumers and funders might be expecting some semblance of 'forest'. While the reforestation projects that are marketed to western consumers might be expected to add to the biodiversity of the land or for more holistic benefit, the only 'recuperated' land – land replanted with trees, but not with the aim of harvesting timber – that I observed in the valley was being made financially viable as a medicinal garden with a tourist trail and a maloka for taking *ayahuasca*<sup>77</sup> grown in the new plots. Despite this, and as will be seen in Chapter 7 with the phenomenon of 'model villages' for the project (Wilson 2014, see also Mosse 2005), one can visit certain areas and gaze out over plantations of *capiroña* and cacao and see a productive landscape, obscuring the wider problems, conflicts and contradictions that come from these uniform landscapes of production.

In the Huayabamba Valley, there is a clear divide between '*foresteria*' and '*bosque*', the former relating to managed forest plantations, often meeting the minimum definition of forest, and

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<sup>77</sup> *Ayahuasca* is a strong hallucinogen and traditional medicine taken in ceremonies throughout the Amazon, and increasingly popular with tourists.

the latter referring to the unmanaged forest<sup>78</sup>. Over time and with further support and valorisation of plantation aesthetics, there is a risk that this becomes self-reinforcing through a process referred to as ‘shifting-baseline syndrome’ (Soga and Gaston 2018). Put by Elaine Gan and colleagues (2017: G6): “as humans reshape the landscape, we forget what was there before ... Our newly shaped and ruined landscapes become the new reality”. As each successive generation grows up viewing their surroundings as ‘natural’, the idea that plantations are forests could become ever more entrenched.

As the above discussion highlights, there is a tension between global discourse of REDD+ and what constitutes sustainability and project practice, which frames conservation and sustainable living in a very specific, productive way. In this sense, the definition of ‘what is conservation’ is constantly in flux – being mobilised by specific actors for specific goals. The emphasis on demarcating more land and securing more carbon, however, has changed both the approach to the work of biodiversity conservation and the expectations and socionatural relations of the communities involved as nature becomes externalised as an asset to be managed by humans for the ‘goods’ it provides in water, clean air and more, alienating its intrinsic (use) value.

## Conclusion

Building on the exploration of the land-sparing ideology at the heart of Pur Projet’s work in the Huayabamba Valley in Chapter 5, this chapter has explored the project-level dynamics and day-to-day work of Biocorredor Martin Sagrado to assess how conservation is interpreted and promoted by the combination of carbon offsets, natural climate solutions and export-based agroforestry.

While the project has attained a great deal of success and recognition – both locally and internationally – certain contradictions highlight risks for both the future of the project and ambitions to roll this approach out in new areas. This was explored above with reference to the project’s focus on generating exchange-value in three specific ways. Firstly, how this framing has focused on extrinsic motivations and crowded out intrinsic reasons to conserve. Secondly, how it has come to dictate project goals and practice, with an ever-increasing focus

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<sup>78</sup> It could be argued that this definition barely holds in some countries, such as the UK, which have replaced most ‘wild’ forests with closely managed land.

on specific metrics and administrative tasks – ‘dead time’ – driving alienation with the project work. And, thirdly, how it is driving a very specific view of the natural world, which sees ‘scientifically’ managed land as preferable to unruly forest, potentially legitimising of further expansion and deforestation elsewhere.

The seeming ambiguity to – or even irrelevance of – biodiversity is chief amongst these concerns. The scale of the project and its ambition is vast, not only in area, but in financial and labour terms too. Conservation outcomes, however, seem limited to headline figures (a rate of deforestation that is lower than estimated without intervention), rather than an increased knowledge of the area, its biodiversity and ecosystems. While carbon credits were – at least rhetorically – set up to be a proxy for biodiversity, they have become a goal unto themselves and incentives are geared towards the protection of carbon rather than creatures. As shown in this chapter, this can be seen in from the approach to patrolling the area to justifications for conservation in training sessions. In turn, while figures on paper and calculations of avoided deforestation are sufficient to generate profits they could have the long-term effect of alienating people from the work, as holistic goals become boxes to be ticked and KPIs to achieve. A well-funded scheme sees time and resources directed at certain goals and local workers can sense that conservation is falling behind.

While this chapter has explored how messages regarding sustainability have become adopted in a diversity of ways, there has been a noticeable reconception of the forest, not as a local common good, but a global one which foreign interests will pay to protect – thus “not only reimagining the value of forests, but also shifting that value from the national to the global scale” (Devine and Baca 2020: 921). Carbon and ecosystem services, along with the sense that there is value to be captured and profited from locally, have become key to understandings of nature amongst many in the valley. This core messaging of Biocorredor Martin Sagrado may have had a mixed impact on people’s lives, but the power to state the terms of these discourses and reward those that follow them is undeniable.

The increase in plantation reforestation has exacerbated this financialised view of the environment, leading to a view of unproductive land as wasteful, poor or worthless and the neat rows of rapid-growth trees – devoid of biodiversity and signs of animal life – as ‘forest’. This calls into question the long-term sustainability of the project as more land becomes seen as in need of ‘*aprovechamiento*’ (exploitation). It also raises broader questions – when trees are

viewed only as timber and shrubland is seen as better burned – as to what type of nature we are (re)creating in carbon-valued landscapes and what is lost in this somewhat culturally myopic view of the natural world.

These concerns are raised not to question the validity of the project itself – an endeavour that has shown a remarkable willingness to change already and will no doubt continue to do so over its 80-year lifespan – but to ask what is left out of a logic that links exchange-value with conservation. At its heart this asks us to reconsider what a conservation project is or should be. Scholars have noted how sustainable development now “appears to be a label now used for virtually any development project in Peru and, as such, of little usefulness” (Young and Leon 1999: 59) and without careful consideration of how and by whom it is deployed, conservation is in danger of being used and abused in the same way.

For this to be sufficiently appraised and the project to evolve to meet the new challenges that emerge it is critical that feedback processes and validation work to highlight problems within the project. This is complicated by the need for a strong narrative of success to both ensure its ongoing functioning in the Valley and the continued sale of credits. Chapter 7 now moves on to explore this dynamic and how – despite the contradictions explored in the steadily increasing focus on production in Chapter 5 and its impacts on conservation work in this chapter – by focusing on success rather than failure, the project runs the risk of continuing with this reinforcing logic, rather than challenging it.



## Chapter Seven: Spectacle, Fantasy and *Phantasmagoria* – The Production of Success

“I don't believe in the rhetoric, I don't believe in the photos, I don't believe in that. I don't believe in the awards... I'm sick of the awards!” – FUNDAVI worker  
03/06/2018

This research has thus far highlighted some of the gaps between rhetoric and reality within the work of Pur Projet in the Huayabamba Valley, with a growing number of contradictions in the social and environmental goals of the project. These contradictions, however, are rarely acknowledged beyond the realms of the valley, with the success of the project being recognised and promoted locally, regionally and internationally. Given the range of challenges emerging on the ground and the, at times frank, assessment of local communities of the failings of the project, how can the reproduction of these powerful narratives of success around the region and from foreign visitors be explained? What creates the dramatic difference between the on the ground realities explored in the previous chapters of this thesis and what is communicated to the wider world?

This chapter explores these questions of how the success of Biocorredor Martin Sagrado is promoted and, in turn, how problems are obscured. While sustaining strong narratives is essential to sell credits through the voluntary carbon markets (Chapter 4), ensure support within regional politics (Chapter 5) and drive engagement at the local level (Chapter 6), this chapter will go further to analyse how – following David Mosse's (2005) observation of development projects in general – dissent and concern in the project is dispersed and scattered below, while enthusiasm is concentrated up high. It details how this success is produced and travels through various parts of the project – from field visits to the villages of the Huayabamba Valley, to regional promotion in events and meetings, to the international marketing that explains purchased offsets to (in this case European) consumers.

Pointing out the disconnect between rhetoric and reality here is important, not to suggest wrongdoing or expose dishonesty, but to show how and why success is produced, and why it is inherent to schemes that seek to trade on voluntary markets. By focusing on producing success and obscuring problems with projects, narratives can misrepresent reality and create false expectations at both the local and international level – identified elsewhere as the hype and hope cycle of REDD+ projects (Massarella et al. 2018). Furthermore, while local

communities will inevitably be disappointed as messy realities fail to live up to imagined riches, the unrealistic promotion of the project makes it seem a trouble-free model for others – including those less scrupulous than Pur – to follow regionally and internationally.

By exploring how success functions in REDD+ projects this chapter adds to an emerging literature on the subject (Büscher 2014, Lund et al. 2017, Svarstad and Benjaminsen 2017, Massarella et al. 2018) and a longer history of critique linking the concept of spectacle to conservation (Igoe 2010, Igoe et al. 2010, Büscher et al. 2012, Igoe 2013, Sullivan 2013a, Igoe 2017). In doing so, it begins to unpack one of the central themes of this thesis, notably how we embody dreams in “projects concerned with space” (Lefebvre 1991: 9) and how an aesthetic is being produced which sees plantations of intensive production as lush forests of green production. In short, how the Green Infrastructure described in Chapters 5 and 6 is not just accepted but celebrated.

Thus, while this chapter is primarily interested in the empirical reality of where and how different types of success spread, it also relies on observing the people who came to observe the project: tourists, business people and government workers. As fieldwork progressed, this story almost became as interesting to me as observing the surroundings myself. Each individual saw the valley differently, with the landscapes, projects and people increasingly reflecting the dreams of those trying to construct them. This chapter will explore this dynamic – analysing how the desires of those involved structure our very way of interpreting the world – and begin to build a case for what this can tell us about project ideology.

Understanding the flows of information in the project first requires an understanding of the verification and monitoring systems in place which feed data and reports back from the field. This chapter will begin with detailing the formal and informal structures in place for this process, highlighting where obfuscations and errors can appear, before moving onto the presentation of the project at three different levels. It firstly looks at how visits to the valley are curated to show off specific elements of the project, before, secondly, providing an example of how the project is celebrated at the regional level through events and awards, and, thirdly, the promotion of the project by the purchasers of the carbon credits. The implications of this production of success will then be discussed, before the fuller theoretical exploration of this approach that comes in the next, concluding, chapter.

## Monitoring and Verification

Project-wide ‘verification’ is conducted every five years by independent bodies in accordance with the rules set out by the Verra system of carbon credits (see Chapter 1). These investigations aim to provide a comprehensive review of how the stated benefits of the project are being distributed and whether the reported ecological and social goals are being met to a required standard. It is a process which involves, alongside quantitative data and desk-based reviews of project documentation, qualitative interviews and field visits by an international team of experts.

The last investigation of Biocorredor Martin Sagrado was conducted in 2015 (before the fieldwork for this thesis), with 72 rapid interviews conducted over the course of a five-day trip to the region by ‘ECOCERT’, a certification organization largely focused on organic farming, founded in France (ECOCERT 2016). The outcome of this report confirmed that the project was satisfactory and “[t]estimonies from direct beneficiaries collected through interviews confirmed that communities are quite satisfied with new alternatives” (*Ibid.* 40).

Having just five days for the investigation, the ECOCERT investigation team were limited in the number of communities that could be consulted, and accordingly focused their efforts in the south of the project zone, where there are more villages clustered together. While this makes sense from a logistical perspective, it concentrates verification on the communities which are most integrated into the project and have seen the most benefit, giving a very partial view of the overall impact.

The list of interviewees provided in the verification document also shows a clear bias towards members of the associations who are the most likely to have benefitted from the project. This again makes logical sense, analysing the impact of those most engaged with the projects, but it fails to provide any balance for the majority of people who *don’t* benefit from the project. As noted in Chapter 6, the focus on extrinsic, financial motivation has caused a stark divide between those who benefit (sometimes richly) from the project and those who do not. In this sense, the verification is analysing whether those *involved in the project* are happy, not whether it has a positive impact on *the community* as a whole, despite making claims to how satisfied communities are. This may explain why, in many cases, my experience and

conversations conducted over the course of fieldwork directly contradicts the verification report.

Verification researchers, as such, did not reach the communities and farmers who told me of issues with the project and a lack of support, not to mention the great deal of anger from many towards ACOPAGRO, reiterated to me in particular by the northern communities. Communities such as Canaan and La Morada, for example, fell outside of verification reports, despite being the most critical in that they are located within the project zone and had registered their anger with the project previously (Cahuata and Angerand 2014). This was the case, too, even with villages only slightly off the beaten track, such as Nuevo Chimbote in the south. Designated as one of the ‘problem communities’ by FUNDAVI, Nuevo Chimbote is only navigable by boat at certain times of the year and is otherwise a (roughly) two-hour hike from the nearest village which needs to be taken in daylight hours, making it difficult to fit into such a short itinerary. In my visits to these villages, many community members were keen to highlight the lack of benefits from the project (as detailed in previous chapters) and even its similarity to previous government schemes, such as a reforestation boom in the 1980s, in failing to achieve any long lasting change.

Verification documents also show a clear tendency to integrate project narratives into reports, reflecting both the spectacle generated by the project and the potentially self-fulfilling nature of verification. For example, describing the outcomes of alternative livelihoods project the verification document reports that those involved had gained “in more intangible values as self-confidence, proud (sic) and respect” (ECOCERT 2016: 40). This is a conclusion which is hard to accurately assess in any manner, let alone by a first-time visitor to the area with just five days to take in the experiences of many villages. I spoke with the individuals concerned with the project that this interview referred to, the promotion and sale of a cacao based drink, *chocoplano*, and struggled to find such a transformation. While buzzwords like ‘empowering’ and ‘pride’ were used by one person, when I asked them to explain how the project had created those feelings, they were at a loss. As we carried on talking they focused instead on the challenges they were facing with the project, after the product had been rejected by local grocery stores in Juanjuí and purchases had all but petered out.

The verification process relies not only on these interviews, but also an analysis of project documentation, linking it to the formal and informal local reporting systems. Of particular note here are the technical meeting summaries, official conservation patrol logs and project databases. Although previously monthly technical meetings to summarise and share progress between the different concessions were reduced to quarterly meetings in 2018, they were important events for the concession heads to feed back on the success of their work and produce documentation which could be assimilated into overall project summaries.

These are opportunities, not just to justify the funding they have received, but also to show how they have been performing in their job roles. As such the emphasis is on highlighting successes and ensuring targets have been met rather than on bad news which may reflect poorly on them. One head of conservation, for example, was utterly absorbed by compiling his presentation to feedback at the quarterly meeting over the space of multiple days. The format for feedback and established measures of success – such as number of patrols, number of training sessions or studies conducted – are then fed back in technical meetings with little space for a qualitative assessment of progress, let alone challenges and problems. This data is then aggregated to one level further removed from the complexity of the field to be summarised under the project categories of success to be delivered to Pur in a spreadsheet<sup>79</sup>. The radical simplification of work conducted is a poor representation not just of meetings and feedback mechanisms, but a whole host of issues. From the overestimation of tourist numbers which count project workers and repeat visitors (such as myself), to the *delivery* of non-timber forest products livelihood projects, rather than their ongoing success (or otherwise), to the misidentification and registering of animals shown in Chapter 6 (e.g. the jaguar). Yet, these inaccurate reports make their way into official verification documentation, going on the record as reported facts.

The reporting of a specific meeting can serve as an example of how the process of translation replaces nuance with success and certainty. As with many of the meetings I attended, the topics to be discussed at the meeting in question were largely technical – initiating new projects, expanding existing ones, registering land – but also it served as a chance to have feedback on a new project. The project was to design development plans participatively with the community, described to me previously by the project lead as "a formal process of

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<sup>79</sup> This process was being updated in 2019 which could dramatically improve communication. This was hard to assess due to a large turnover in senior staff but could potentially help to address many of these concerns.

participation to define the development of the community". Even prior to the meeting, the community development plans had become a central claim to the success of participation in the REDD+ project, showing local communities were actively engaged in co-creating its goals.

While the general concept to be introduced was a relatively simple one (for the community to work together to define what they wanted from the project and wider goals for development), it was presented through a series of slides showing how it fit into both Pur's strategic pillars of work and the regional and national government frameworks. After an initial set of slides reiterating the success of the project thus far and its leading role in the region's Production, Protection and Inclusion model, the slides increased in complexity, with dense diagrams detailing the different regional government departments and development strategies. Despite the enthusiasm from the presenter, I watched the crowd grow disengaged from the presentation, struggling to follow the detail of the slides. Even being familiar with many of the organisations and strategies on display, I too struggled to make sense of the interlocking relationships and responsibilities amidst the overwhelming number of acronyms. After a few minutes most of the attendees were checking phones or otherwise looking away from the projection screen.

When it came time for questions, the presenter's request for input into what sort of thing could go into a development plan was met with blank faces. With no questions or suggestions forthcoming, he proposed that one of the goals should be for there not to be deaths and violence in the village by 2030, which was, as can be imagined, met with general agreement. The one question that was raised was a simple one: "why are we wasting time talking about things that aren't real?" Undeterred, the presenter took the meeting as a seal of community approval and proof of concept that participation would be possible if the project were to proceed.

During the session an attendance sheet was distributed, with everyone, including the presenters, signing, thus boosting official attendee numbers. By the time the session leaders started the series of presentations, however, it was apparent that there were more people presenting and organising the meeting than attending. Those that were attending were all part of the association, with only one female member present, but these numbers will suggest good attendance and approval of plans when they are assessed by Pur or by project auditors,

such as ECOCERT. In reality, however, only a tiny portion of the community is actively working to set the agenda for a core project that will determine a community development plan. This was a situation regularly repeated in the valley. At times, members were even encouraged to sign their approval for the project on behalf of all family members despite not being in attendance. These inaccurate attendance figures were then reproduced in official documents and fed back in project summaries, providing anyone assessing the project with an exaggerated measure of engagement.

The fallibility of the local reporting systems and international verification investigations highlight some of the challenges facing Pur in acquiring rich, genuinely representative data on the impact of their work. Successes from the field are reported from their team and confirmed by independent bodies, while groups locally, regionally and internationally reiterate this success. While it is to be assumed that marketing will emphasise the positives of the project, the enthusiasm from other actors involved reflects a risk for the project as problems and contradictions can be obscured by the focus on success. A challenge which was acknowledged to me by one of the project leaders within Pur:

“It's very easy to have people saying, ‘OK, this is wonderful, this is wonderful, we saw those guys are super happy... Oh this is working so well, this is working so well’. So there's a general culture, especially nowadays with the start-up mind-set, with the American, like, ‘yeah it's amazing, what we do is great’. And I think it's good to be proud of what you do and I think I'm proud of what Pur Projet is doing, and it's great, but also, identifying where are the big threats and the big issues is a way of working better.”

The difficulty in seeing these big threats and issues highlights not just how important critical feedback is to the evolution of the project, but also how hard it can be for Pur to receive these challenges to their work. In this context, the monitoring and verification systems are critical to ensuring problems are surfaced and communicated to both Pur and FUNDAVI's leadership teams. The evidence provided above highlights some of the challenges with ensuring that the verification of success does not become a *fait accompli* – or as put by David Mosse (2005: 173-5, following Power 1999) ‘rituals of verification’ – obscuring the diverse outcomes of the work and looking to confirm rather than challenge narratives. While this section has explored why formal and informal systems of monitoring and verification systems are failing to raise these challenges, the next will take this a step further to look at

how the spectacle created by the project not only obscures problems, but creates and reinforces specific aesthetics of the forest.

## Building Spectacle

This section looks specifically at spaces in which external actors interact with the Biocorredor Martin Sagrado REDD+ Project – at the local, regional and international level. The project is presented at these spatial levels in distinct ways which begin to show how they reflect both the empirical reality of the project and the ideologies of the groups involved. By detailing how the success of the Biocorredor Martin Sagrado REDD+ Project is presented and produced in specific ways, this section will show how, as they obscure emerging issues with the model of development, each of these spaces feeds the other creating a powerful spectacle for those involved.

### Model villages

Understanding why the impression that all is well is so prevalent with visitors to the project requires not just a focus on what people communicate, but what they see in the Huayabamba Valley and *how* they see it. This can be explored through the experiences of a first-time international visitor to the area visiting different elements of the conservation and development work.

I had accompanied this particular visitor on their tour of plantations, cacao plots and production areas and was able to sit down in the quiet of the early evening to discuss their thoughts on the project. While overlooking the landscape of the valley, they talked not just of the success of the cacao, but the beauty of the landscape: how green and diverse it was. Looking out over the same view, what struck me was the uniformity of the landscape – tidy plots of cacao towered over by neatly spaced *capirona*. While they saw a verdant jungle landscape, I saw the lack of birds and in place of the richness of the forests in the distance, an environment geared towards production. How could these two views of the same landscape be so far apart?

The tour of the valley that this visitor had received followed a standard programme for international guests, regional politicians and other dignitaries. While this highlights various



elements of the project – from reforestation and cacao plantations to primary forest and tourist spots – it often focused on visits to two specific villages, Pucallpillo and Santa Rosa. Indeed, while Dos de Mayo may well be the largest village in the valley with the longest history of conservation work, local leaders of the association APROBOC complained to me that they rarely, if ever, got visits from international project leaders, let alone regional elites interested in their work. The logic of focusing on these two communities was explained to me succinctly by one FUNDAVI worker: “you wouldn’t take them to one of the villages where there are problems, would you?”

In contrast to the communities deemed a ‘problem’ by project workers, Pucallpillo and Santa Rosa, two small villages accounting for around 40 families each, have been well integrated into the project from its inception. They are home to two of the wealthiest families in the valley, both have individuals sitting on the board of FUNDAVI, and they are also where two Pur Projet employees own property for when they visit the region.

Perhaps most importantly, however, they have also been the sites of further investment from an additional, higher value Fairtrade scheme, thus providing for more investment in the community and cacao production. Rather than going through the existing local cooperatives, a Swiss / Peruvian company set up in partnership with local communities links farmers directly to small-scale, luxury markets in Europe and bringing with it better prices and more support (see Chapter 5). As such, both villages show a greater sophistication with how cacao is grown and harvested, creating a specific impression of the agricultural system in the valley.

Pucallpillo has an impressive cacao producing facility which allows for more control over the drying and refining process, ensuring a better final product and allowing for the collection of the cacao juices, which can be processed into liquor and other products. To speed up the production process, the community has also invested money from higher value Fairtrade scheme into their own fertiliser production process – with raw ingredients shipped from Juanjuí and distilled just outside of the village – and were planning to invest in fumigators to help with the problems with *el gusano* (see Chapter 5). Innovative new varieties of cacao are also produced by the farmers in the village, eschewing the generic clone CCN51 that is ubiquitous elsewhere in the valley in favour of native varieties that produce a product that is no longer a mass produced commodity crop but a gourmet speciality. For some visitors, tasting ceremonies are even prepared where different varieties of cacao are lined up for guests

to sample. Local experts talk through the different flavour profiles and how they reflect the local ecosystem or native strains. For the visit of one potential funder I even assisted in sweeping the forest to clear any fallen leaves and make the plantation look as neat as possible.



**Images 7.1 and 7.2** The cacao processing facilities in Pucallpillo

Short walking tours around the villages highlight these features, and in Santa Rosa tours are supplemented with a trip to a ‘medicinal garden’ reforestation project, one of the very few in the valley not planted with the timber market in mind. The view from the *maloka* (a traditional ceremonial building) serves as a vantage point to view the project components of reforestation, timber and cacao. From the *maloka*, the narrative can be explained visually: deteriorated land can be seen next to plot after plot of cacao, troublesome weedy regrowth

next to neatly replanted rows of trees and a whole village seemingly supported by the consumption of high-value chocolate.

While ‘conservation’ rarely featured in tours, plantations and cacao plots were introduced and accepted as the ‘forest’, with the assumption that what is green is inherently good for biodiversity. The role of offsetting too – and the generosity of donors and consumers in funding this work – is highlighted. Taking this logic to its almost absurd extreme, the Swiss / Peruvian chocolate cooperative’s consumers are able to pay to ‘adopt’ a tree, which is planted next to a sign with their name. These donors are then encouraged to fly from Europe to Peru to visit their tree and the wider project in ‘Impact Trips’<sup>80</sup>.



**Image 7.3** A tree planted and named for a donor (surname obscured)

<sup>80</sup> <https://www.chobachoba.com/trips/> [Accessed 21 January 2021]



Tours inevitably include discussion of the project – its success, its role as a pioneering model for others to follow and its international accolades and local awards. Local guides, echoing project leaders, refer to it being ‘a model for the world’ or the valley as ‘a template that has been rolled out in 40 countries’. The narrative, which is repeated at many meetings regarding the project, reinforced the synergistic visions of Pur, FUNDAVI and local cacao production and not only seemed plausible to visitors, but helped to reinforce local belief in the project as well.

Sitting in the comfortable accommodation of Pucallpillo and gazing out onto a perfectly productive and green landscape, it was easy to see how the project could work. Having spent most of my time in Dos de Mayo and smaller communities further upriver I had largely been exposed to people’s concerns: the spiralling problems with cacao, the lack of investment in conservation work and the claims of corruption and inequality. In Pucallpillo, the cacao production was well enough funded to make up shortfalls from disease and instability. The village was surrounded by greenery and people had planted flowers, brightening up the small central pathway that connected the homes. Local farmers were used to receiving visitors and enthusiastic to show off the project, with a narrative to share with whomever made the trip.

The narrative is a powerful one – highlighting the many positive impacts of the work in the valley – but the examples of these two small villages, with their additional funding and support, creates a seductive vision of success for visitors. Arriving at the village, I saw the vision of the productive Amazon that I had read about in marketing material for the project and heard about from advocates in the region. This enthusiasm, however, not only obscures the challenges facing other parts of the project and the overall strategy, but builds as it travels further from the valley.

### **Regional representations of success**

At a regional level, many groups have a stake in the success of the projects, from the organisations directly involved in the project (e.g. ACOPAGRO) to local companies and regional politicians keen to show that the model of cacao and carbon can deliver benefits for communities across San Martín. While this was something reproduced and reiterated to me by a wide variety of actors in the region, events were an especially instructive example of how (and whose) success is communicated to wider audiences.

In both 2017 and 2018, the San Martín Regional Government held large events celebrating the food, farming and future of the forests of the region – with both years receiving visits from the current President of Peru (Pedro Pablo Kuczynski and Martin Vizcarra respectively). In August 2017 (10th-13th), San Martín hosted ‘ExpoAmazonica’, a national, annual celebration of Amazonian products, businesses and investment opportunities which moves to a different region of the Peruvian Amazon each year. The success of this event in attracting business and finance – receiving 59,000 visitors and “generating business of around [\$19.7 million]<sup>81</sup>” (BCRP 2017: 106) – led the San Martín Regional Government to hold its own event the subsequent year. The Festival de Gastronomía Amazonica San Martín was held between 31st May and 3rd June 2018 at the same site in the city of Tarapoto that hosted ExpoAmazonica a year earlier. These events provided an opportunity to see how the goals and outcomes of the Biocorredor Martín Sagrado were being woven into wider ideals of development for the region – and marketed as investment opportunities.



Image 7.4 Flyer for the Amazonian Gastronomic Festival

As might be expected – particularly from the gastronomic event – much of the focus of the many stalls, products and services on offer was food, and the region’s efforts to link small-

<sup>81</sup> Converted from S/. 71 million.

scale producers to global markets. International chefs gave talks about the quality of the local ingredients, politicians talked of the huge potential value of the ten key commodity markets that the region wanted to exploit, and local leaders discussed the harmonious balance between the production of crops and conservation, specifically through agroforestry and reforestation.



**Image 7.4** A banner from the Ministry of Agriculture's stall at ExpoAmazonica highlighting the vast amount of potential land available for forestry plantations around the country.

More broadly, the events were promoting the combined conservation and development opportunities in the region, with examples such as The Biocorredor Martin Sagrado REDD+ Project amongst the conservation and reforestation work on show. The speech from the (then) President of Peru, Pedro Pablo Kuczynski, at ExpoAmazonica brought these themes together and highlighted the scale of his ambition, promising a bold new wave of development for the region. This was to be based on the global demand for sustainability initiatives and his own goals of greater connection to global markets through finance and infrastructure links to ever deeper parts of the country's jungle (*'selva'*) regions. The message was backed up by multiple government stalls promoting investment opportunities around the country, particularly through forestry plantations (see Image 7.5).

Both events had a range of speakers giving talks couched in the language of climate change and the need for the productive potential of the Amazon to be unleashed in a low carbon and environmentally-friendly way. The Production, Protection and Inclusion model (see Chapter 5) and its success in the Huayabamba Valley was central to this. Across various talks, and particularly at the 2018 event, this was proposed as an alternative model to the industrial farming complex which had devastated environments and caused wider health problems in national and international communities. As stated by one speaker from the Ministry of the Environment, the new model San Martín offered was a chance to link developmental and environmental goals, “*gana a gana*, or as the gringos say ‘win-win’”.

This narrative was built upon by a spokesperson for the regional government who introduced the Production, Protection and Inclusion strategy in more detail to a large crowd. The speaker focused most of their time on the production element of this strategy – running through numerous slides of statistics on agricultural growth, and the promise of new strains of cacao and high-value crops like *sacha inchi* to reach new markets. This was followed by just two on the protection element of the model: the region-wide deforestation statistics and a slide on the Biocorredor Martin Sagrado REDD+ project, the example chosen from across the region of protection in action. The synergy between the Production, Protection and Inclusion model and Pur Projet's work was highlighted on a slide titled “the economic and social benefits of conservation”, allowing the speaker to explain that even conservation could be profitable. The size of the area was shown in hectares, converted into the quantity of tCO<sub>2</sub>e and finally the level of funding received – almost \$1.4 million (S/. 5 million) – and

the 3,800 people ‘directly benefiting’ from this money as well as the potential extra income on offer from beekeeping and ecotourism.

Simplification does not come much more radical than a complex web of projects spanning multiple communities, goals and interventions to a single slide, but what is highlighted here is instructive of how the reality of the Huayabamba Valley is communicated beyond its geographic boundaries. In the presentation, the valley was presented as a simple model for conservation projects in the region to follow and there were three attributes that were emphasised in particular. Firstly, its scale, being the largest private project in the region, secondly, the financial return from carbon credits (exceeding that of other REDD+ projects in the region) and thirdly the amount of small-scale farmers involved. These points summarised the key messages put forward by FUNDAVI and Pur’s project leaders, but in being transmitted from the reality of the valley to the slide deck of a leader from the regional government the nuance in how benefits get shared – and who exactly is benefitting – is lost. Headline figures of thousands of acres and millions of dollars are linked to all supposed ‘beneficiaries’ in the area and any suggestion of conflict is erased.

The presentation of the Biocorredor Martín Sagrado REDD+ Project fits into the wider narrative – and spectacle – being constructed at these events. Videos of tourist destinations, including the Huayabamba Valley, ran on loop and indigenous dancers took to the stage and toured the auditoriums, adding ‘authenticity’. The whole event thrived off the narrative that small-scale producers are being empowered and their lives enriched by the coming together of conservation and production goals. The conclusion of the day’s presentations saw the official launch of the ‘San Martín brand’, which provides a certification system for local products and services which support the economy and ecology of the region, with a view to reaching high-value international consumer markets and attracting tourism. The level of enthusiasm and effort being directed at this initiative was palpable and the role of conservation, key. A well-produced promotional video funded by the regional government showed clips of indigenous people working the land to produce a variety of commodities, such as cacao and coffee, highlighting the rich, green forests and protected areas of San Martín, as awards commemorating the new brand were presented to its founding ambassadors – including FUNDAVI and ACOPAGRO.



It was a compelling spectacle, showing agriculture's role in delivering developmental and conservation goals, but this event also obscured much of what was happening in the region. The idea that small-scale producers are being linked up to high-value global markets, while partially true, is at odds with the majority of agriculture in the region which focuses on the increasingly intensive production of a few key crops. For example, one senior leader of the Ministry for the Environment extolled the virtues of the local diet and how production of a diversity of crops for self-consumption was the only thing separating Peruvians from Western-style obesity epidemics. While the example of Peru's rich heritage of different strains of tomatoes was used as an example, the markets of Juanjuí uniformly only had a single variety (*tomate italiano*). Moreover, as detailed at length in Chapter Six, there is outright hostility towards diverse crop-systems for self-consumption in the Huayabamba Valley. Another speaker highlighted the region's award-winning coffee and chocolate, while the products common in the valley were the mass-produced instant coffee of Nescafé or Don Gato and cheap milk chocolate bars from multinational brands.

The gap between the spectacle presented and the experience of the local producers it spoke for – the gap between rhetoric and reality – was also evident at the event. While project leaders shared their visions of sustainable production as investment opportunities and negotiated deals ('generating business') behind closed doors, a few members of the organisation from Dos de Mayo, APROBOC, were at a small stand at the back of the festival site. Expecting an opportunity to sell goods and find partners for their products, this group had brought a selection of chocolate and chocolate products. They were one of the few small producers which had stalls at the event and in stark contrast to the big cooperatives and brands who had huge stalls, more footfall and more influence, they were sharing a small stall at the very back of the auditorium with some orange farmers from Juanjuí.

As I sat down with one farmer from Dos de Mayo, Eduardo, at the end of the first day of the 2018 event, he expressed his frustration. With such a small stall he had sold very little and could not afford the expenses of hotels and lost earnings to stay for the full festival. Ahead of the event he had anticipated being involved in negotiations regarding the chocolate being produced by the association and the timber maturing in plantations back at the village. Instead, on arrival he found his entrance pass did not allow him to enter the large hangers with blacked out windows reserved for groups to discuss investment opportunities. I seemingly didn't need any pass and, on entering, could see where the serious deals were being

discussed. Behind closed doors, tables were set up neatly, with a constantly refreshed table of food and cold drinks. Suited figures shook hands and shared business cards and brochures, but all in the absence of the farmers themselves. Eduardo had been told that his community was growing the best cacao in the world and was at the forefront of a new, cooperative-based timber industry, but in this environment, certain doors remained closed to him.

For FUNDAVI, the project's impressive budget and attraction of foreign finance grants its leaders an increased power to define discourses around conservation in San Martín. It has also led to numerous connections and jobs interchanging between employment in Biocorredor Martín Sagrado and the regional government posts in San Martín. These connections, however, are not available for the farmers involved in the project, such as Eduardo, who Pur seek to 'empower'. Their voices, perhaps inevitably, are lost in service of creating a more memorable – and marketable – narrative.

### **International marketing**

The way success has spread through the region – how it is discussed and used politically – is often unseen by those who work for Pur and certainly out of their control. Internationally, in contrast, they have a greater role in promoting their work and the potential of agroforestry in conservation more broadly. On an international level, Pur's work is promoted and discussed in their own and client marketing – as well as via numerous third parties, such as carbon market think tanks<sup>82</sup>, other reforestation organisations and in the media (see for example Beavis 2014, Smedley 2015, Romo 2018). It would be easy to view this process cynically as an attempt to produce snippets of images and statistics for social media, but workers at Pur explained in detail the processes in place to ensure clients were communicating their work clearly and without exaggeration. As noted by two employees:

“At Pur Project we always are very careful about clients' communication and what they can [...] say or what they can claim, about their project [...] so we always [...] validate [...] their data and their statements [...] we are very, very careful about that.”

“We're always going to be acting as safeguards [...] we do check content that is produced about the projects that we operate, and we do encourage them to communicate, but we are careful in how they phrase whatever it is that they put out there.”

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<sup>82</sup> Such as the Natural Capital Coalition or the Global Canopy Project.

These comments highlight the balance that is struck between the need to engage clients (and their customers) with positive stories and ensuring that there is a level of honesty in how the work is communicated. Or as described by one Pur worker “we're trying to push them towards [...] more humility I suppose and, just, a little bit less bragging about stuff”. This was reiterated by multiple staff who stressed a genuine concern in the business not to oversell success and ignore failure, but to drive real change, not just in the communities with whom they work, but also in the companies that fund them.

The impacts of conservation are, however, complex to communicate in marketing, sales pitches and internal communications. As one employee noted (and as discussed in Chapter 4), this complexity is one of the reasons that reforestation is considered an easier sell to clients: “conservation is difficult ... you know, the whole idea of developing alternative livelihoods to deforestation, blah, blah, blah, that's really hard for people to understand. whereas planting a tree [...] people plant [...] little trees in their backyards and you [...] can relate to that.”

This is particularly the case when explaining the additionality of a conservation project, a complex calculation of baselines and reported deforestation. These calculations can mean competing and contradictory claims of the amount of land or carbon saved, with any group buying credits seemingly able to take credit for the protection of the whole area. For example, the National Co+op Grocers – a chain of affiliated grocers in the USA – refers to its work in the Huayabamba Valley as building the ‘Coop forest’<sup>83</sup> and Ben and Jerry’s is able to claim on its website that “384,195<sup>84</sup> hectares of forest have been preserved as of February 2015”<sup>85</sup>. In both these cases success for the *whole project area* is being claimed, despite their funding only covering a specific number of credits. Such multiple counting exaggerates the significance of these individual brands’ impact which could mislead consumers.

Furthermore, both The National Co+op Grocers and Ben and Jerry’s routinely combine the work of reforestation with that of conservation, with all of the results presented as stable,

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<sup>83</sup> See <https://www.welcometothetable.coop/article/coop-forest-carbon-offset-program-slows-climate-change> [Accessed 8 March 2020].

<sup>84</sup> This figure also appears on Pur’s website and includes the in process applications for additional conservation concessions.

<sup>85</sup> See <https://www.benjerry.com/whats-new/2015/agroforestry-in-peru> [Accessed 8 March 2020].

certain and uniquely down to the work of the donors. Pur themselves present the project in these simple, uncontested and ecologically stable terms – with consumers able to ‘buy’ acres of Biocorredor Martin Sagrado or offset tonnes of carbon directly<sup>86</sup>. It is hard to imagine how failure or uncertainty could be presented in these formats. Communicating the work to the wider public *requires* creating a powerful sense of spectacle around the project, described by one of Pur’s marketing team as its focus on ‘immersion’. Through immersion they aim to “make people *feel* what we do through authentic content. Field content, interviews, pictures and shooting”. This has led to exotic and exaggerated descriptions, such as of the ‘Co+op forest’:

“Paddle up the Huayabamba River in northern Peru, and amidst the roar of breathtaking waterfalls and chatter of tropical songbirds, you’ll come across the Co+op Forest. This lush, mountainous landscape is thought to be one of the most bio diverse regions in the world, home to over 160 mammal species, more than 300 bird species and hundreds of butterfly, amphibian, reptile and plant species as well.

It is paradise, but sadly much of this region is recovering from decades of deforestation, while its remaining old growth forest remains at risk for petroleum development. But thanks to intervention by concerned cooperative businesses, this region continues to play a meaningful role in slowing climate change.”

The language used is instructive not of the actually existing environment, but an idyll in the minds of the marketers. ‘Paddling’ up the dangerous rapids of the Huayabamba Valley is certainly not recommended and the impression of paradise is evocative but essentially dishonest. More concretely however, the description over-emphasises the threats facing the forest and its role in ‘slowing climate change’. The possibility of petroleum extraction, for example, does exist in the area, but is not feasible currently due to prohibitive costs and the lack of infrastructure in the mountainous areas where it exists. Furthermore, if it were deemed to be profitable and desirable to extract the reserves that exist the concession agreement would not necessarily stop the national government from simply cancelling the contract and proceeding anyway. The region more broadly, is experiencing such rates of deforestation that its role in slowing climate change is negligible. While exaggeration and obfuscation may be commonplace in consumer-facing material ‘selling’ the value of a project (or indeed a product), it highlights the level of abstraction and simplification used when

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<sup>86</sup> As noted in Chapter 4, the pricing itself reflects something of the project. Offsetting a tonne of carbon directly through Pur is cheaper through a conservation project than a reforestation project. It also costs less to adopt an acre of conservation land than to offset a ton of carbon, see <http://accounts.purprojet.net/en/shop/public/tab/6#tabs-4> [Accessed 8 March 2020].

communicating *conservation success* for carbon markets. Furthermore, there is no space in this story for actors beyond the cooperative businesses, let alone that the project may fail to deliver on its stated goals. Problems are obscured and success amplified.

While the accuracy of communications is managed by Pur's client account handlers, the focus on project success grants clients a great deal of confidence in the approach which can manifest in the 'enthusiastic' descriptions above. This also allows clients to present themselves as the solution to climate change, helped by the rhetoric of 'nature based solutions'. One blog in response to the Amazonian wildfires of 2019 by a senior leader at Pur's client Nespresso, for example, argues that consumers should "choose brands that contribute to the solutions, rather than the cause of the problem"<sup>87</sup>. In this blog, Nespresso's historic role in deforestation for its coffee and the ongoing environmental problems associated with its single-serve coffee pods (Cumming 2020) are obscured by its commitment to the Biocorredor Martin Sagrado REDD+ Project.

While these marketing claims and immersive content create a powerful narrative behind Pur's work they make it harder for consumers to evaluate accurately the outcomes of projects and the impact of offsetting. As Pur has grown, these presentations of their work have crossed over from just online spaces to physical ones. For example, a recent launch of Pur's partnership with luxury makeup brand Kiehl, targeted air travellers, with massive displays set up in airports using VR headsets to show pristine nature, replanted thanks to the partnership (not promoting the project in Peru in this case). The campaign may well have been successful, but the high energy use of the physical display and the high-consumption travel that it supported stand in contrast with the broader goals of the company.

From a pragmatic perspective, highlighting the lush greenery saved by conservation in marketing materials takes precedence over the unruly worlds that they really represent, but without a balance in how the work is presented, narratives can take on a life of their own. Despite the company's claims to humility, the reinforcing nature of spectacle has created stories of success that are hard to challenge, even while dissent and concern becomes increasingly dispersed and scattered.

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<sup>87</sup> See <https://www.linkedin.com/pulse/amazon-burning-can-business-provide-part-answer-jean-marc-duvoisin/> [Accessed 8 March 2020]

## Spectacle as Dreams and Distraction

The narrative of success created in the Huayabamba Valley is infectious to be around, and integral to the wider impact of the project. An aura of positivity and optimism is created which suggests good things (more money, better jobs, infrastructure works) are just around the corner. Previous chapters have provided specific examples how the focus on success has the effect of raising expectations for those involved with the project, such as through the development of the local timber industry (Chapter 6) or for broader infrastructure projects (Chapter 5). In REDD+ projects more broadly, this has been referred to as the ‘hype and hope cycle’, which requires the exaggeration of benefits to get project buy-in from local communities, politicians and donors, which projects ultimately struggle to deliver (Massarella et al. 2018). This chapter has been taking the idea of this cycle further, to analyse its role in generating spectacle and its impact on the reliability of monitoring and verification systems.

The constant focus on producing a narrative of success in the project also obscures its problems. The impacts of the cacao crisis (see Chapter 5) are emblematic here. Project workers often ignored the problem, or tried to divert attention from it when government workers or foreign investors visited. This meant that all appeared well and, away from the problems on the ground, I was told in a number of interviews with government officials that the problems were marginal and as a whole production was increasing in the region. Project leaders outside of Peru were in turn, shocked by how bad the cacao crisis was on the ground, having not heard the stories of personal struggle with the rapidly spreading diseases but having seen, instead, with their own eyes success stories and innovative small-scale projects or products. On an individual level, this chapter described the experience of the farmer, Eduardo, who expected the project to have granted him a seat at the negotiating table at The Festival de Gastronomía Amazonica San Martín. Despite the powerful narrative of empowering small-scale farmers, this has real world limits, as the real deals still go on behind closed doors and farmers remain locked outside.

The obfuscating nature of spectacle was also highlighted in the international audits and verification systems. The amount of money spent on these schemes (see Chapter 4) – and the high-value international jobs that they create – highlights their importance to project functioning, but as shown above, they still prioritise rapid pace and breadth. With investigations conducted at such speed, quality and depth is sacrificed for the surface

appearance of the projects, with critical checks and balances becoming in Mosse's (2005) terms 'rituals of verification', simply a case of ticking boxes and rehearsed answers. Rather than suggesting any wrongdoing or corruption<sup>88</sup> the evidence provided above demonstrates how positive reports can follow the framing and narratives that project developers wish to show.

Visits to communities such as Pucallpillo and Santa Rosa with limited problems and highly engaged local communities, as shown above, act as 'model villages' (see Wilson 2014, Wilson 2016) proving the success of the project and allowing people to see with their own eyes a sustainable future of development, conservation and consumption. It doesn't seem to be any accident that this is where two employees of Pur have their own houses in the valley. As good examples as these villages are, however, they obscure more than they show about the success of the approach. For example, it is hard to tell where benefits are accrued by REDD+ money as opposed to the various other projects that the communities attract (as noted of REDD+ projects in general by Svarstad and Benjaminsen 2017) and their small populations make the allocation of benefits far easier. Thus, while Pur is reliant on feedback mechanisms to surface problems, the powerful narratives that the project strives to sustain and incentives to report uniquely positive outcomes, obscures them.

Sustaining such narratives has become central to the FUNDAVI project team. I discussed this with one member, Sergio, who talked at length about the time and effort it required for those involved in the project. While he laughed about the seeming obsession with posed photos and awards ceremonies, his real frustration was with the amount of energy invested in this part of the work, over how the new projects and ideas would actually be implemented. Sergio explained how the constant visits, demonstrations, events and awards distract time and attention from the actual functioning of projects. The fact that plans may be illogical or results not as anticipated is ignored by the leaders who are focused on maintaining enthusiasm. In 2018, for example, Sergio showed me in careful detail how plans to plant *sacha inchi* – the nut which was experiencing a boom in popularity in international markets – across the project would fail, long before the local market collapsed in 2019 (see Chapter 5). But, the caution he urged was not accepted by others within the organisation who saw it as central to a new project which was being enthusiastically pursued (*Finca la Media*, see Chapter 5).

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<sup>88</sup> Although, it is also notable that the only checks and balances on this new avenue of wealth creation are from the organisations that are also paid handsomely for their work in setting up the schemes – Verra and CCB.

Sergio's core point was that, at a day-to-day level, the project is most focused on keeping things moving at the expense of stopping, thinking, consolidating: "it's all about keeping the machine going". This was put starkly by one ex-colleague of Pur Projet's co-founder, who explained how his approach was to always get excited by the next big thing "regardless of the mess he leaves behind".

More broadly, when discussing the challenges of the project, a senior leader of FUNDAVI also reflected on how the constant demands of the project – particularly its focus on carbon and quantifiable signs of success – left him with no time to think about wider strategy. While the lack of thinking time, the multiple changes of strategy and the shallowness of monitoring and verification may seem like distinct phenomena, this chapter has shown how they are connected through the production of success as spectacle.

## Conclusion

The way success is presented and reproduced by various actors in the Biocorredor Martin Sagrado REDD+ Project obscures the various challenges facing the approach to conservation and development. This chapter has shown, however, that this is not a coordinated effort of obfuscation. All groups have an interest in a sober understanding of the impacts of the work and, yet, via the various means by which the project is communicated, success travels faster than failure. This poses serious risks to both the project and, more broadly, how schemes such as these are used for offsetting.

Previous chapters have shown why this success is critical to the functioning of the REDD+ work in the Huayabamba Valley: Chapter 4 in its importance in selling credits, 5 in its role in integrating the project into region-wide policies, and, 6 for sustaining local interest in the project and expanding activities. The powerful narrative of success can also be seen in the articles and reports by media sources and carbon think tanks, keen to popularise a model of conservation that needn't sacrifice agricultural commodity production (see, for example: King et al. 2016, UFF 2016, Romo 2018). This international acclaim, alongside the awards and events locally, reinforce the idea of success. This obscures not just the numerous challenges which the project is trying to get to grips with (as noted in Chapters 5 and 6 particularly), but also the enormous amount of work – and money that was required to develop and expand the model in the Huayabamba Valley.



This takes debate on the Spectacle of Nature further than simply the marketing put out to sell this vision, to how it reinforces the beliefs of those involved. While the importance of spectacle in conservation projects has been noted by many scholars (see Igoe 2017 for example), these have often focused on the increasingly sophisticated techniques of engaging donors and consumers, such as ‘Web 2.0’ (See Büscher 2016). This chapter has built on these insights in conjunction with the work of David Mosse (2005) to suggest that spectacle is just as critical at other spatial levels of the project, from the presentation and reinforcing of success in local villages, to the regional events and their promotion of conservation as a profitable activity. This represents spectacle taken to its “almost surreal extreme” in the “mixture of distraction and reinforcement that serves to reproduce the mode of society and economy” (Harris 2012). I argue that this more accurately reflects the totalising impact of the ‘society of spectacle’ from Debord’s (2009) original thesis and impacts not just donors, but how the project is reproduced and even monitored and evaluated.

This reading of spectacle moves analysis from highlighting dishonesty in the presentation of projects, to how it reflects a broader “hostility towards the art of paying attention” inherent to capitalism (Stengers 2015: 76). Reflecting on the shopping arcades of 19th Century Paris, Walter Benjamin described the coming together of commodity fetishism and bold futurism as a *‘phantasmagoria’*, “which a person enters in order to be distracted” (Benjamin 2002: 7). This chapter has begun to draw the same conclusions from the landscapes created in the name of carbon credits. The ideological role of seeing production and protection side-by-side is at its most important when it actually permits continued exploitation – creating a powerful reinforcing dream of ecology and economy balanced while closing off other ways of living within the natural world. It is at this level that the work of spectacle – and ideology – can most usefully be analysed, where the lines of what is possible and impossible are drawn and ideas become self-reinforcing rather than challenged.

While Pur Projet workers stressed to me the need for humility in what had been achieved – and the importance of appreciating locality in new projects rather than rolling out a seemingly successful model – from the offices in Paris, or even from the field, it is hard to appreciate how their ideas and models spread. As detailed in Chapter 5, the narrative of increasing agricultural production, reforestation and carbon credit funded conservation has become a model to be applied elsewhere and a yardstick to measure the success of other

schemes. Across the state the success of the model in metrics of carbon, trees and numbers of producers, has been packaged up as a catch-all solution to poverty reduction, ethical consumption and saving nature (of ‘green capitalism’, Dunlap and Sullivan 2019: 13), making it seem a simple solution to be recreated without due consideration of its challenges.

Appreciating the nature of this spectacle also implies the need to identify what is left out of these visions and cast as ‘waste’ – acting in Benjamin’s words as the ‘ragpicker of history’ (Sandilands 2011). Against the narratives of success and presentations of pristine environments, this thesis has raised numerous contradictions. While visitors to the valley are shown a ‘paradise’ of ethical consumption, it is equally possible to view them as the waste landscapes of the past: of overgrown airfields; of abandoned coca fields from the cocaine trade; of previous reforestation efforts left to overgrow and claim the wild margins again; of abandoned and rotting cacao plots; and of the empty packets, rubbish and remnants of consumption floating downriver. While the successes of the project are to be celebrated, this chapter has called attention to the power they hold in distracting those assessing the scheme from seeing its contradictions.

This has particular repercussions for REDD+ projects. The need to sustain narratives of success channels time and energy towards this goal, at the expense of focusing on contradictions and the consolidation of existing work. Moreover, for structural reasons, the verification and feedback loops fail to reveal problems that they should. These critical aspects of REDD+ become not just a significant drain on resources, but ‘rituals of verification’ (Mosse 2005) that sign off on project success without exploring the wider implications of the work. Understanding these challenges is no easy task and requires long-term engagement with the communities involved to identify people, ideas and lifestyles that are excluded.

For Pur Projet, the lack of critique of their work also makes it hard to adapt and evolve over the length of the project. While the scheme is still in its early years with plenty of scope to change direction, hearing only about the good aspects of their work and dismissing criticism as ‘problem groups’ forecloses the possibility of alternative paths of action. Without scrutiny the project will continue to be seen as an unbridled success and a template to be rolled out elsewhere, with holistic systems of production, for example, unable to match up to the triple win of plantation models of agriculture and timber.

Beyond these practical points, this chapter has explored some of the ways in which the project provides the raw material for narratives that reinforce ideologies. The green, working landscape, dominated by cacao and *capiroña* reflects an idealised vision of a productive jungle for visitors. As noted of the carbon markets more generally, this has an important role in sustaining belief in the capitalist system: regardless of their contradictions, the very existence of villages and areas where conservation appears to exist in harmony with commodity crop production “are enough to create the perspective of an economy at last ecologized” (Bonneuil and Fressoz 2016: 218). This ideological role of the project is now to be taken further on a theoretical level in the next, concluding, chapter.

## Chapter Eight: The Impacts and Ideologies of For-Profit Conservation

For-profit conservation exists at the coming together of a range of new actors and ideologies seeking to govern socionatural relations. Where it was once the purview of the state, “[n]ow, it is enlightened (often international) conservation organizations and ‘for-profit’ companies that are the bearers of modern conservation consciousness” (Vandergeest and Peluso 2015: 173). This research has introduced the Biocorredor Martin Sagrado REDD+ Project to explore the meanings and motivations behind this modern conservation consciousness and to add depth to our understanding of the organisations and for-profit companies that promote it.

The various projects designed by Pur Project in Peru were set up with the goal of empowering small-scale farming communities and have local support, impressive brand name clients and globally recognised verification of success. In many respects it has been a model example of how a for-profit REDD+ scheme can function across a landscape, combining trees, forests and farmers in its reforestation, agroforestry and conservation projects. As shown in this research, however, some core contradictions are inherent to the scheme and the international structures it operates within, which threaten its longer-term success.

This concluding chapter will further examine these contradictions and tensions within the project, revisiting the research questions around which this thesis is framed to link the evidence presented in Chapters 4 to 7 with wider trends in political economy and ecology. These questions are as follows:

1. How is value created and captured in for-profit conservation and reforestation projects on the voluntary markets?
2. How do the incentives and requirements associated with carbon offsetting on the voluntary markets change how the natural world is perceived and produced by actors involved in the project?
3. Can market-based, for-profit conservation and reforestation schemes deliver on their stated goals and balance economic and ecological demands?

This chapter will reiterate and draw together the key findings from the thesis in response to these research questions.

## Value Creation and Capture in For-Profit Conservation

### *Research Question 1:*

*How is value created and captured in for-profit conservation and reforestation projects on the voluntary markets?*

Chapter 4 detailed the processes of privatisation and commodification at the heart of for-profit conservation. It showed that in the case of the Biocorredor Martin Sagrado REDD+ Project, from Pur's original project design through to delivery, the project was designed to **empower** small-scale farmers and resulted in a series of subtle – and not so subtle – changes in ownership and de facto rights to the forest. In its projects, Pur supports local communities in gaining title through agroforestry and reforestation projects – helping farmers retain their land and strengthen their legal claim to settle it. Furthermore, support was actively provided to register additional conservation concessions via local producer associations, providing communities with their own protected areas (and potential future source of REDD+ profits).

Thus, while there is a dual privatisation taking place – of land and carbon – local communities gain rights to one, while Pur secures the rights to the other. As Pur works not to dispossess communities, but to build projects around their empowerment – including in supporting the titling of lands and assets to them – this makes the question of what has been privatised and how both more urgent and original in its analysis. While the privatisations and dispossessions associated with REDD+ have been detailed by various scholars of neoliberal nature and green grabs (Corson and MacDonald 2012, Asiyambi 2016, Chomba et al. 2016), few have explored the production process of carbon, and the creation of value and dynamics of exploitation within actually existing carbon markets (although see Nel 2017, Andreucci et al. 2017, Carton 2020, Palmer 2020).

Chapter 4 attended to this gap in the literature by analysing the relationship between ownership and dispossession in the production of surplus value in the Biocorredor Martin Sagrado Project, connecting it with an emerging body of work examining the production process in forestry carbon (Ekers 2015, Boyd and Prudham 2017, Carton and Andersson

2017, Palmer 2020) and the role of rent in carbon markets (Felli 2014, Andreucci et al. 2017, see also Boltanski and Esquerre 2016). In doing so, it suggested that any analysis of for-profit conservation needs to focus not simply on *asset capture*, but the process by which *value is created and shared* in forestry carbon projects.

### **Carbon rent and carbon enrichment**

Chapter 4 elaborated on the role of a project developer in carbon markets and showed that Pur is not in the business of commodity creation, *per se*, but captures surplus value through its rights to claim *rent* on the potential carbon sequestration of its conservation, reforestation and agroforestry projects; a process referred to by Andreucci and colleagues (2017) as ‘value-grabbing’. Chapter 4 went further, however, to show how value is created by Pur, not simply “by virtue of having an exclusive property title” (*ibid*: 30), but through an active process of production – its ability to measure, market and sell credits on an annual basis.

Without a standardised price for carbon, Pur’s role is not simply to bring the technical expertise of how to register a project – indeed much of this work is outsourced to third parties – but to utilise its connections in the business world to market the credits. Via a range of marketing and production techniques Pur is able to build a narrative around the project which emphasises its co-benefits and enhances its value to sellers – creating ‘charismatic offsets’ or ‘boutique carbon’ (Paterson and Strippel 2012). The varying ability of actors to do this work can mean the difference between not selling credits, selling them for \$1-2/tCO<sub>2</sub>e (as noted of another, similar, scheme in San Martín), or the over \$10/tCO<sub>2</sub>e that Pur has secured.

Chapter 4 analysed the creation of this value through the lens of *enrichment* (Boltanski and Esquerre 2016) to uncover some of the dynamics of selling carbon. Specifically, it showed how the distinctive narrative needed to add value to (or ‘enrich’) the carbon has resulted in a distinct spread of skills and spend. While the highest-value jobs in marketing, sales and verification involved in trading on the voluntary market are inevitably based in France, the approach has also impacted on the work of those managing the project in San Martín. As noted throughout this thesis, workers in the Biocorredor Martín Sagrado REDD+ Project highlighted the strain that marshalling the narrative of the project (as a ‘success’) placed on their time and project budgets – and the distraction it caused from the core work of the

project. From the ‘dead time’ of new project meetings and increasing administration responsibilities discussed in Chapter 4 to the hosting local and international dignitaries and attendance at awards ceremonies described in Chapter 7, activities aimed at exhibition and expansion have frequently taken precedence over consolidation and conservation.

This was complicated further in Chapter 4 which showed how the underfunding of local teams was exacerbated by the very narrative that helps to sell the project – the focus on agroforestry and working with local producer associations. As detailed in Chapter 4, relying on producer associations to be genuinely representative and a conduit for local benefits has led to money flowing in the project in indirect ways, with benefits often directed at specific individuals via agricultural production, rather than public goods. While there are undoubtedly benefits to such an approach – from increased income streams, diversification and resilience in cacao farming for example – many in the valley fall outside the purview of the project and, as noted in Chapter 6, see no benefits coming from it.

### **Access and exploitation**

The differing ability of groups to benefit from these schemes and capture surplus value has wider implications for for-profit conservation. The cost to register and manage a concession is prohibitive for most groups by itself, however, accessing REDD+ funding via the voluntary markets implies not just a need for capital and technical expertise for verification processes, but an ability to connect with buyers. The ability to add value to a project requires not just a knowledge of sales and marketing, but also the mobility and connections to find sellers and convince them of the quality of credits – it represents the differentiated ability of groups to “circulate in the complex universe of the commodity” (Chiapello in Boltanski and Chiapello 2018: 16).

The inequality of access means that regardless of share of profits there is a fundamental power asymmetry in the very structure of the voluntary carbon markets. This has serious implications for who can extract value within for-profit conservation projects. While Pur is expanding its global presence and profit rapidly, local teams complain of being underfunded and the supposed beneficiaries of the conservation concessions attest to there being no benefits from the project. While the language of partnership and the ‘empowerment’ of small-scale farmers permeate the project, I was regularly confronted with limitations of this

logic in reality. The *Festival de Gastronomía Amazonica* event detailed in Chapter Seven provides perhaps the starkest example of this. While project leaders received awards and negotiated deals behind closed doors, the cacao farmers from Dos de Mayo were left selling oranges and hot chocolate from a small stand at the back of the festival site, unable to afford staying for the full event.

### **The inequality of carbon**

The analysis presented here suggests that any assessment of the benefits and equitability of these schemes requires attention to the *creation of surplus value* and the differentiated ability of groups to capture it. Specifically, a focus on how equality, power and exploitation are built into projects designed for the voluntary carbon markets suggests that simply ‘empowering’ local groups or integrating them more fully into commodity markets does little to challenge wider power relations.

These findings will be particularly crucial, not only for analysts, but for project developers such as Pur Projet that are committed to the long-term support of communities. Highlighting challenges and power discrepancies will help to build genuine solidarity and partnership over the course of this project. Such rigour in exposing inequality is all the more important given the need to present the project as problem-free in its support of small-scale farmers, which could lead to the model being implemented by others without the safeguards, profit-sharing and long-term partnership offered by Pur. As shown in the chapters above, the success of the scheme has helped to drive a more general focus on voluntary carbon markets in San Martín and across Peru, taking an increasingly important role in setting discourse in the country.

More broadly, the analysis from Chapter 4 shows the centralising tendencies in the creation, auditing and marketing of for-profit conservation projects – and highlights the type of globally-mobile individuals and companies that are poised to take advantage of the structures it engenders. Obscured by green economy narratives, NGOs, companies and wealthy individuals – regardless of motivation – have been able to secure de facto control over vast areas of conservation and ‘stocks of carbon’, dictating new rules of access and use in the process. All other factors aside, in the case explored here a private entity with no experience of, or expertise in, conservation, but instead in fair trade and agroforestry, holds power over



one of the largest areas of private conservation in Peru. This highlights the diverse new actors involving themselves in the work of conservation and will undoubtedly have ramifications for the way this work is conducted and as to what, and who, is considered ‘green’ (Fairhead et al. 2012). The ideology behind the decisions of who or what is green will be returned to in the third section of this conclusion, but the next will investigate its impact on the landscape level and how the discourse surrounding for-profit conservation promotes very specific socionatural relations, while disadvantaging a wealth of others.

## Nature as Infrastructure

### *Research Question 2:*

*How do the incentives and requirements associated with carbon offsetting on the voluntary markets change how the natural world is perceived by actors involved in the project?*

Chapters 5 and 6 expanded on the commodification of carbon analysed in Chapter 4 to look at the production of nature in voluntary carbon market projects. The second research question that this thesis focuses on thus adds nuance to the trend of privatisation analysed above by offering an analysis of *landscapes and discourses* in the Huayabamba Valley and how they have spread through the San Martín region.

This section will revisit the specific formation of socionatural relations in San Martín analysed in Chapters 5 and 6. It will show how, thanks in large part to the framing of nature as ‘service provider’ and ‘solution’, the natural world is being treated as a stable system on which to build human development. In practice, this favours the simplified, repetitive and manageable landscapes of plantations. This connects the literature exploring the production of nature (Ekers 2015, Boyd and Prudham 2017, Carton and Andersson 2017) with an emerging discourse in NGO and policy circles around the concept of ‘*green infrastructure*’ (see Chapter 2), to question how power and ideology is performed and reinforced through the trees, forests and plantations of for-profit conservation.

I argue that the green infrastructure introduced in this thesis can be seen as the ideological corollary to nature-based solutions (Nesshöver et al. 2017), which has played a pivotal role in the recent boom in voluntary market sales (Donofrio et al. 2019). This suggests that the attribution of the same sense of predictability and quantifiable value that we expect of the

built environment to the natural world constitutes a critical characteristic of the ‘fourth moment’<sup>89</sup> in political forests (Devine and Baca 2020) and should be of central importance to researchers investigating for-profit conservation and nature-based solutions.

### **The production of nature as infrastructure**

Chapter 5 introduced the production, protection, inclusion paradigm in San Martín and how the ‘optimisation’ of the landscape rested on the logic of land sparing: the intensification of production in certain areas to compensate for – and thus avert – the deforestation of certain other areas of the forest. Land sparing has resulted in an enormous growth of productive activity in San Martín, with agricultural production soaring while the regional government pursued its conservation agenda in the early 2000s. Between 2001-2009 the agricultural sector in San Martín grew by 80%, while the number of protected areas now covers a total of 1.95 million hectares in the region, not including the numerous buffer zones. Reforestation has also boomed with multiple projects around the state and millions of trees being planted and vast areas being designated ‘suitable for reforestation’.

In officially demarcating the land, new rules and regulations were standardised in a way that makes land more investable for the private sector (rendering it legible, as per Scott 1998), something highlighted by the aggressive marketing of reforestation in regional trade fairs. This provided fertile ground for groups looking to establish projects through voluntary carbon markets and has resulted in a patchwork of reserves and buffer zones across the region. Importantly for the regional government, everything in this patchwork has been assessed for potential value and put to work – cacao, coffee, bio-pharma, tourism, REDD+.

To deliver on this ‘productive regime’, the natural world is being asked to deliver more through technical ‘improvements’ – manifested locally in the ubiquitous concept of *‘aprovechamiento’*. Project workers, local NGOs and regional officials decried local farming practices that did not ‘take advantage of technology’, such as trimmers, fertilisers and high-yielding seed clones, or produce commodities for valuable international markets. Chapter 5 detailed this process in the cacao fields of the Huayabamba Valley, but also in the subtle

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<sup>89</sup> As noted in Chapter 2, the fourth moment “is marked by the rise and role of non-state actors producing and managing political forests, in particular, “non-profit”, “non- governmental” conservation organisations” and “distinguished by the hegemony of sustainable development, climate change mitigation, and biodiversity conservation as the means and end of political forestry” (Devine and Baca 2020: 915).

move in reforestation projects from diversity to intensification. While agroforestry may have originally been seen as a way to boost biodiversity within cacao plots and potentially diversify production, in reality it has resulted in a plantation style system, often relying on just one, two or three species of timber, chosen for their rapid growth and profitability.

This is far removed from the marketing and original plans of the projects, with ideals of forested landscapes in reality being replaced with select fast growth species in an almost monoculture fashion. In these plantations, reforestation and conservation projects, nature is, thus, not just being protected or replanted in the name of conservation, but *improved* in carbon delivery. This highlights the move from the formal subsumption of nature – expansion of commodity production based on the commodification of existing carbon – to the real subsumption of nature – trees planted for their specific ability to capture carbon and ease of control. In essence, nature is “(re)made to work harder, faster and better” (Boyd and Prudham 2017: 877). Under these conditions the natural world is ‘enhanced’ in its ability to sequester carbon and in turn counter climate change – an emerging trend noted in various forms across the globe (Smith 2007, Carton and Andersson 2017).

The production, protection and inclusion model of San Martín has thus used the zonification of land to deliver ever more productivity through *pushing nature to work harder at the margins*. Production is intensified – with fertilisers and farming practices pushed to extract as much as possible from the land – particularly for communities adjacent to areas of high conservation significance. Critically too, however, reforestation and conservation are integrated into a wider productive regime *optimised for carbon delivery*, rather than, for example, biodiversity or local use.

### **Productive conservation**

Chapter 6 further highlighted how this is reflected in conservation priorities and people’s changing relation with the natural world. While legal definitions may demarcate these plantations as forest thanks to height, crown coverage and area covered, they bear little in common with the complex and interdependent forests that exist outside of such strict management systems and their lack of biodiversity is missed from official project metrics. Despite this, the neatly planted rows of plantations have begun to define ‘forest’ and ‘conservation’ for some in the Huayabamba Valley – with farmers referring to the

surrounding forest and weedy edges as ‘poor’ or ‘empty’ in comparison or even wanting to reforest the jungle itself which is deemed to grow back too slowly and irregularly.

San Martín’s production of nature is thus reflected in a changing approach to conservation and a wider reframing in the region as ‘productive conservation’. Here, conservation is no longer accepted as a bulwark against further growth and consumption (reflecting trends identified in Chapter 2), but as a way of profiting from non-commodified spaces and areas previously outside the bounds of productivity. This approach can be summed up with a response to the role of conservation by one informant from the regional government, “conservation for me is a way of protecting resources and at the same time exploiting them”. This reframing of conservation as production fits into wider trends across Peru, with biodiversity becoming almost irrelevant. As one respondent from a public-private conservation organisation noted about biodiversity: “Nobody uses the word, nobody knows the concept. Everyone calls it ‘natural resources’. And when people think of natural resources they think of water, soil, soil for agriculture [...] That's how it is”.

### **The socionatural poverty of nature as infrastructure**

Three key conclusions can be drawn from the analysis of green infrastructure presented in this thesis. Firstly, agroforestry can't be assumed to be a ‘climate solution’ if it is subject to the same market imperatives as standard plantation approaches. In the Huayabamba Valley, while the project has not been a top-down drive for monoculture production systems, the combination of what is accepted locally and what is the most profitable has driven specialised zones of production and decreasing diversity in the approach. The outcome, as with Lefebvre’s observation of the built environment, means that *‘repetition rules supreme’* as landscapes of small scale producers specialising in a single crop begin to resemble agroindustrial models.

The promise of delivering the greatest possible benefits to local communities while pushing to purge all slack from the system reflects a wider dominant ideology of optimisation which errs towards efficiency and the search for surplus value (see Malm 2018b), but is also the path of least resistance locally. The danger of a focus on efficiency and optimisation, however, is that instead of funding new diverse and supposedly ‘green’ production systems, by failing to move beyond *market imperatives* a project aiming to support small-scale

producers, with a view to delivering artisan, high-end products, will ultimately follow the same developmental path that it aims to supplant.

Secondly, the evidence summarised above adds to research which suggests that the connection between carbon and biodiversity conservation is not something we can simply assume, with carbon-focused conservation at times inconsistent with broader biodiversity or deforestation goals (Ferreira et al. 2018) and reforestation providing mixed evidence of biodiversity benefits (see, for example, Osborne 2015, Richards and Lyons 2016, Holl and Brancalion 2020, Heilmayr et al. 2020). Furthermore, the new assemblages that make up green infrastructure overestimate nature's predictability and carrying capacity – and underestimate its instability. Chapter 5 detailed the emerging risks from 'unruly nature' and how diseases have been spreading rapidly through the Huayabamba Valley. While offsetting schemes are reliant on an assumption of stability, fires, floods and pests can devastate forests, not to mention crop failures or changing government policies which could lead to increased deforestation. Put simply, the carbon that exists in forests can't be treated with the same certainty and permanence as that which is emitted in burning fossil fuels and is no replacement for a focus on emissions reductions and supply-side dynamics (Newell and Simms 2020). Such uncertain outcomes *call into question major tree planting targets* like the Bonn Challenge, which can create perverse incentives for monocultures and plantations at the expense of natural regrowth and forest (see also Hua et al. 2018).

Thirdly, green infrastructure is also reflected in how local conceptions and attitudes towards these areas can change. Pur's involvement has thus had the knock-on effect of highlighting the enormous potential value for the total carbon in the area. The perception that the forest is a store of vast and immediate profit is commonplace in the valley, as was shown in Chapter Six. While forests become a source of wealth, however, 'empty', weedy or overgrown land is in need of being 're-carboned' and where plantations are viewed as desirable and a form of 'conservation', from a purely sensory perspective they seem devoid of any sort of life beyond the hulking trees which rapidly stretch up to the light. Strolling through the silence of the carbon-credit funded plantations – devoid of bird life and diversity – one can reflect on an entirely new nature being produced (and appreciated) in the name of development.

The evidence presented here thus builds on analyses of how capital 'works *through* nature' (Moore 2015) to produce specific ecosystems and political forests that favour the

accumulation of capital (Smith 1990, Smith 2007, Ekers and Prudham 2015, Carton and Andersson 2017) to highlight the ways in which they also reflect ideologies of control. The production of nature as infrastructure thus follows a growing trend of viewing the natural world as the building blocks for development or as ‘spaceship earth’: an understandable, controllable, manipulable and reliable system, which humans *must* manage to avert climate disaster.

Pointing out the failures of green infrastructure is not to call for its opposite, a hands-off approach to the natural world that would reinforce similarly stark dichotomies between nature and society, but to highlight *the specific production of nature it entails and the alternative approaches it obscures*. Cloaked in a language of optimisation and stability, the green infrastructure view of the world reinforces specific spatial relations and structures of power. Furthermore, in contrast to ideas of natural capital (Fletcher et al. 2018, Sullivan 2018a), green infrastructure has the potential to attract those who disavow a neoliberal approach but still appeal for the use of nature as a solution to climate change. This makes it a useful lens with which to view nature-based solutions and is the focus of the next, and final, section of this conclusion.

## **(Carbon-Neutral) Growth Without Limits**

### *Research Question 3:*

*Can market-based, for-profit conservation and reforestation schemes deliver on their stated goals and balance economic and ecological demands?*

The third section of this concluding chapter builds on the analysis above to ask whether Pur’s model of for-profit conservation is able to deliver on its central goal – to reconcile the demands of economy and ecology in projects. Some inconsistencies in the claimed ‘triple win’ of biodiversity conservation, local development and the mitigation of global carbon emissions have already been established here – namely the inequity built into the structure of carbon markets and the irrelevance of biodiversity in the production of carbon – but this section goes further to ask whether an ideological commitment to growth in the project obscures the contradictions it creates.

Here, I build on the literature on neoliberal nature which has shown that current discourses reframe capitalism from the cause of environmental damage to the cure (Büscher and Fletcher 2015, Sullivan 2018b), to examine a central contradiction to Pur's work: how for-profit conservation schemes can rely on a capitalist model while simultaneously disavowing it. In doing so, I argue that internalising critiques of capitalism actually allows for *expanded consumption*, spurred on by the belief that the work has a higher purpose.

Regardless of whether the company is driven by 'profit maximisation' or not, to achieve its ambitious goals it needs to expand, driven by a belief that there are greater benefits in scale and that reaching more markets is the best way to raise more money for the project and achieve its wider landscape goals. This section will explore this dynamic, showing how the project tends towards expansion and economic growth and in doing so *contradicts its more holistic goals for development, reducing deforestation and the reduction of carbon emissions*. This summary will provide the basis for a broader analysis of the nature of ideology in for-profit conservation and reforestation.

### **Economic growth and development**

As noted in Chapter 5, despite Pur's intention to provide a more holistic development model for local communities – and successive project development plans and investigations of co-benefits attest to this vision – it is increasingly focused on commodity crop production and a model of individual, economic benefits. The intensification of cacao and other crops is central to the project in both compensating for expansion into protected areas and delivering local benefits in lieu of direct payments. Despite plans for diversification, the focus on intensification has resulted in an ever-increasing focus on supporting commodity crop production and a *sense of almost limitless potential growth* for project workers and regional leaders.

The prospect of commodity crop production being anything other than expanded is rarely considered, with the natural world and technical improvements, as noted above, assumed to pick up the slack of increasing demands from intensification and the growing problems with diseases and crop failures. Little is spoken about a plan for moving away from cacao or curbing commodity production in favour of more food grown for local consumption (the challenge in promoting this was discussed in Chapter 6). Neither is there an

acknowledgement that the growth of the sector could be limited or saturated as bigger players establish plantations and more development projects focus on the expansion of the sector to ever more parts of the region<sup>90</sup>.

Where a need to diversify has been addressed in the valley, it has been done through a focus on other commodity crops, or increasingly, on the timber market. This is at the heart of the current strategy for FUNDAVI, and as explained to me at length by its local leaders, the founding of a new company: *Amazonia Justa* is central to their time and efforts. Amazonia Justa is an initiative of Pur and once fully established will be another for-profit company that will specialise in commercialising the sustainable timber from Pur's plantations, alongside other forest-based resources from the area.

The reinforcing nature of commodity production thus not only obscures other potential models and pathways for more transformational local development, but subsumes them as what is seen as 'feasible' locally drives projects to focus on expansion and intensification of production. Thus, while Pur may be rhetorically committed to providing a more transformative development (or a "true social revolution"<sup>91</sup>), in practice this has been reduced to a focus on profit-making commodity markets. This risks simply reproducing existing winners and losers of systems of commodity production rather than achieving longer-term change for local communities.

### Frontier thinking

The illusion of impressive cacao productivity and the promise of vast profits from timber and carbon is, in turn, driving migration to the region at the same time that the failure for these benefits to materialise is increasing local frustration. As noted in Chapter 6, project leaders made the link between the success of the project and recent increased migration and rates of deforestation in the valley. The focus on expansion and commodity crops has thus, counterintuitively, created a vibrant new commodity frontier which risks *further deforestation*. For exactly this reason, local conservation scientists have strongly suggested that "in newly settled areas, actions should be focused on controlling land trafficking and

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<sup>90</sup> Kröger and Nygren (2020), for example, have shown this dynamic in action in Nicaragua and how after an initial boom local cacao producers lost out to bigger companies.

<sup>91</sup> <http://www.purprojet.info/en/2013/12/17/the-martin-sagrado-project-is-a-true-social-revolution/> [Accessed 21 January 2021]



trade rather than applying incentive-based forest conservation tactics” (Shanee and Shanee 2016: 13).

Moreover, beyond the growing demand for land, the focus on timber plantations also encourages an extractivist (albeit ‘sustainable’) mentality and infrastructure. Local communities trained in logging and with the tools and means to do it, will be looking for more expansion opportunities and the project risks simply moving deforestation around, rather than driving an overall decrease. Indeed, often when people promote the idea of the timber market locally it is with the caveat that individual incentives will prevent deforestation, as though local groups are impervious to the desire to get more money once timber plantations are established, or that more people won’t be drawn to the profitable commodity markets created. In contrast, the deforestation rates detailed in Chapter 6 and their relationship with commodity frontiers and expansion supports recent evidence from San Martín which links integrated conservation and development projects with an *increase* in deforestation from recipient groups (Chambers et al. 2019).

### **The triple offset**

The effects of the focus on growth are felt not just in the continued deforestation, but in emissions at multiple scales. Here, while the ‘verified emission reduction’ may be retired to ensure double-counting does not take place, it cannot account for the *ideological license* it grants others to compensate for the project. To expand, while the official offset of the carbon credit is accounted for by the emissions of Pur’s customers, it fails to result in any local net reduction in emissions, as local populations shift deforestation to other areas (as above). Regionally, too, the scheme legitimates an expansion of the agricultural frontier through “un-green grabbing” (Apostolopoulou and Adams 2015) with palm oil and other plantations (see Chapter Five). One senior government worker in the ministry for the economy, for example, explained how conservation projects such as Biocorredor Martín Sagrado, justified agricultural expansion in other parts of the region.

The project has thus resulted in a ‘*triple-offset*’, which threatens to undermine any claims, not just to ‘net-zero’ emission goals, but to any real reductions at all. While the continuation or expansion of deleterious activities elsewhere is, of course, the logic of offsetting, the evidence presented over previous chapters suggests that the success of the project has been

compensated for outside of project management at local and regional as well as international levels. The ‘triple-offset’ that has occurred suggests that the role of carbon and trees in countering climate change – as Negative Emissions Technologies or nature-based solutions – may be being overemphasised.

### **The nature of ideology (and the ideology of nature)**

By questioning some of the assumptions and outcomes of the work in the Huayabamba Valley, and for-profit conservation more generally, this research has shown how these projects may end up replicating, rather than countering the ecological and social contradictions of capitalism that they strive to overcome. Pur’s work in Peru may not be for ‘profit maximisation’ but *it grows without limits*. More trees are planted every year, commodity crops and cattle are expected to deliver ever more productivity and more carbon must be secured in concessions. Thus, while the project explored here seeks to balance the worlds of economy and ecology, following Marx (1990 [1867]), where these two areas are granted equal rights, force decides – and goals of ecological sustainability fall by the wayside of economic growth.

Approaching the project outcomes so critically is not to discredit the success and plaudits it has achieved, or to claim wrongdoing, but to highlight the power of ideology in constructing and maintaining for-profit conservation. The failure to address questions of consumption and deforestation is, of course, a far broader issue and stems from approaches at a regional, national and international level. Instead of attempting to build a more resilient locally-focused production system, however, the project is forced to continue commodity production, while at the same time simply moving extraction and destruction around. While the project at times attempted to embrace production for self-consumption and food sovereignty rather than security, or a more diverse approach to reforestation, project workers are trapped in being unable to convince local farmers of their benefit over more profitable approaches and without the time and focus to critically assess the work (see Chapter 7).

Chapter 7 of this thesis analysed the processes of monitoring, verification and communication within the Biocorredor Martín Sagrado REDD+ Project and how the rhetoric of success can obscure these problems and contradictions facing the work. Here, I would further argue that this failure lies not in corrupt or dishonest plans, but in *how the*

*production of nature and the production of success combine* in voluntary market projects. Plans evolve, not simply designed from up above and enacted perfectly, but through a process of negotiation and negation, highlighting the pervasive effects of ideology within the project. This expands on the framing of ideology introduced in Chapter Two of this thesis to show how projects can be viewed not “a smokescreen for a conspiratorial agenda, but rather [to] illustrate the extent to which capitalist desires are ultimately subordinated to the accumulative drive of capital itself” (Wilson and Bayón 2017b: 11).

While my time working in the plantations and cacao plots of the Huayabamba Valley amongst the encroaching pests and diseases gave me a specific perspective on the landscape, government officials were able to view the ever growing number of cacao plots and increasing production as evidence for continued economic development in the valley and international visitors were able to gaze out and see a green land, of rich biodiversity and fine cacao production, suggesting a future of ethical consumption. I suggest here that understanding the stark divide between the rhetoric of ethical consumption and the reality of people’s lived experiences – the “discrepancies between story and disposition” and “the ways in which power says something different from what it’s doing” (Easterling 2014: 214) – should be a priority for researchers that wish to understand the nature of an emerging green capitalism.

While within the projects in the Huayabamba Valley this manifests itself in the failure to see contradictions within the work conducted, it also provides the basis for an ideological view of the world in which capitalism is addressing its ecological crisis, allowing continued growth without real results. As noted in Chapter 2, an examination of the dynamic by which capitalism is internalising its ecological critiques requires a reframing of “nature–society scholarship away from a preoccupation with neoliberal natures and toward the more general role natures play in producing value and enabling expanded capital accumulation” (Johnson 2017: 319). This research has thus explored not only the role of private actors as a homogenous group governed by a singular desire for profit, but elaborated on how the dreams and desires of poverty reduction, ethical consumption and saving nature are combined – attending to a gap in the literature on how these are “enrolled into one package to advance ‘green capitalism’” (Dunlap and Sullivan 2019: 13).

## The Myths and Machinations of Voluntary Carbon Offsetting

The metamorphoses of trees to carbon, forests to plantations, ecosystems to infrastructure and farmers to green entrepreneurs documented in this research raise numerous questions of voluntary carbon offsetting, but chief amongst these is a simple one: what is a forest? Travelling through the farms and fields of San Martín I was able to reflect on this at length and the dissolving nature that carbon offsetting has on terms such as reforestation, agroforestry and small-scale production. It seems with each of these areas our current framings are not sufficient and as supporting each becomes a measurable target, headline figures begin to bear little resemblance to the reality of what is being produced and lost. This has led to a drastic simplification of ecosystems and a uniformity of landscapes produced in the name of ‘saving nature’.

Furthermore, the evidence presented here suggests ongoing contradictions and long-term risk in the approach taken to conservation in the Huayabamba Valley. Despite decrying profit maximisation, the profit motive appears to be at the heart of Pur’s work, with growth allowed to continue without limits and well-connected actors able to amass assets and extract substantial profit. Rather than challenge this approach, Pur Projet builds on it, bringing into its orbit some hitherto non-commodified small-scale production systems and socionatural assemblages, through a discourse of creating entrepreneurs building sustainable businesses in the Amazon. This permeates the whole project and lies at the heart of Pur’s approach: high-consumption lifestyles can continue, even for the most problematic commodity crops, if local people use trees more effectively.

Here, I concur with Bonneuil and Fressoz (2016: 197) that the key issue to understand is not: “the emergence of an ‘environmental awareness’ but rather the reverse: to understand the schizophrenic nature of modernity, which continued to view humans as the products of their environment at the same time as it let them damage and destroy it”. This research has suggested the answer to this lies in how this ‘schizophrenic nature of modernity’ actually reinforces its own contradictions. It highlights that the same process by which the social and artistic critiques of the 1960 were integrated into capitalism – as detailed at length in the *New Spirit of Capitalism* (Boltanski and Chiapello 2018) – can be seen at work in how ethical companies in the voluntary carbon markets mobilise critiques of capitalism and yet fail to fundamentally change this model of growth. As with any capitalist system, this makes it

“necessarily growth orientated, technologically dynamic, and crisis prone” (Harvey 1996: 295) something reflected in the pages and chapters above. Capitalism pushes for more – and faster – and this research highlights the dangers of applying this logic to the natural world.

The narratives of productive conservation, however, do not just compete with each other in the search for offset money but ‘crowd out’ other approaches and intrinsic motivations to conserve (Agrawal et al. 2015), thus closing off other potential ways of living in and with the natural world. Understanding this dynamic and the process by which it happens is crucial to analysing the emerging flows of exploitation and ignorance wrapped into for-profit conservation and ensuring its spectacular presentation of productive conservation, green plantations and ecological consumption does not come at the expense of alternative worldviews and socionatures.

And, yet, as contradictions mount up and unruly nature defies its domination, dreams of ecologised economies become ever grander. Companies are being created to turn carbon plantations into investable assets. Tech-minded entrepreneurs are launching new carbon markets, carbon ‘coins’ and exchanges to take advantage of blockchain technology (Sullivan 2018b). Drones are being designed to create plantations at a rate of 100,000 trees a day that remove the need for local involvement, with forests shot from the sky and maintained by algorithm. While Pur would no doubt bristle at some of these, they will eventually have to compete with carbon offset schemes elsewhere as well, which may have more exciting, attractive stories to tell.

This thesis began with a quote from the co-founder of Pur Projet, Tristan Lecomte (2019): “Let's stop fussing about what is the best solution for climate and our ecosystems: it's trees” and in the pages above has challenged this framing. While reforestation and changing agricultural practices will no doubt have a role in any response to the climate and biodiversity crises, this research has suggested that they are no replacement for radical emissions reductions, a sober assessment of consumption and alternatives to extractivism-based models of growth. It has, further, highlighted how for-profit conservation models could change our perception of the natural world and produce certain ecosystems at the expense of others. Put simply, it has shown that despite the growing popularity of nature-based solutions and offsetting schemes, nature cannot be viewed as simply a solution to capitalist society's problems.

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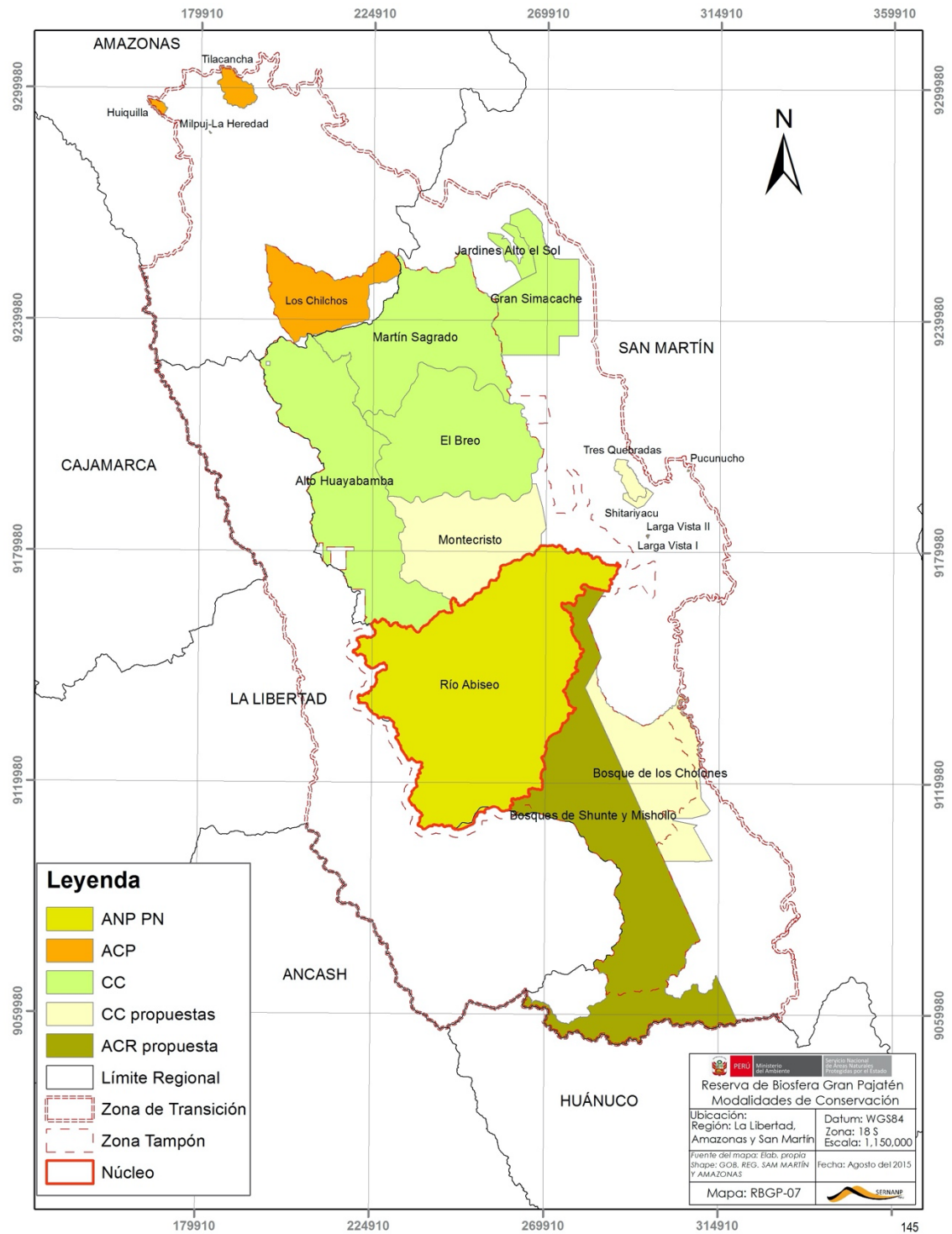
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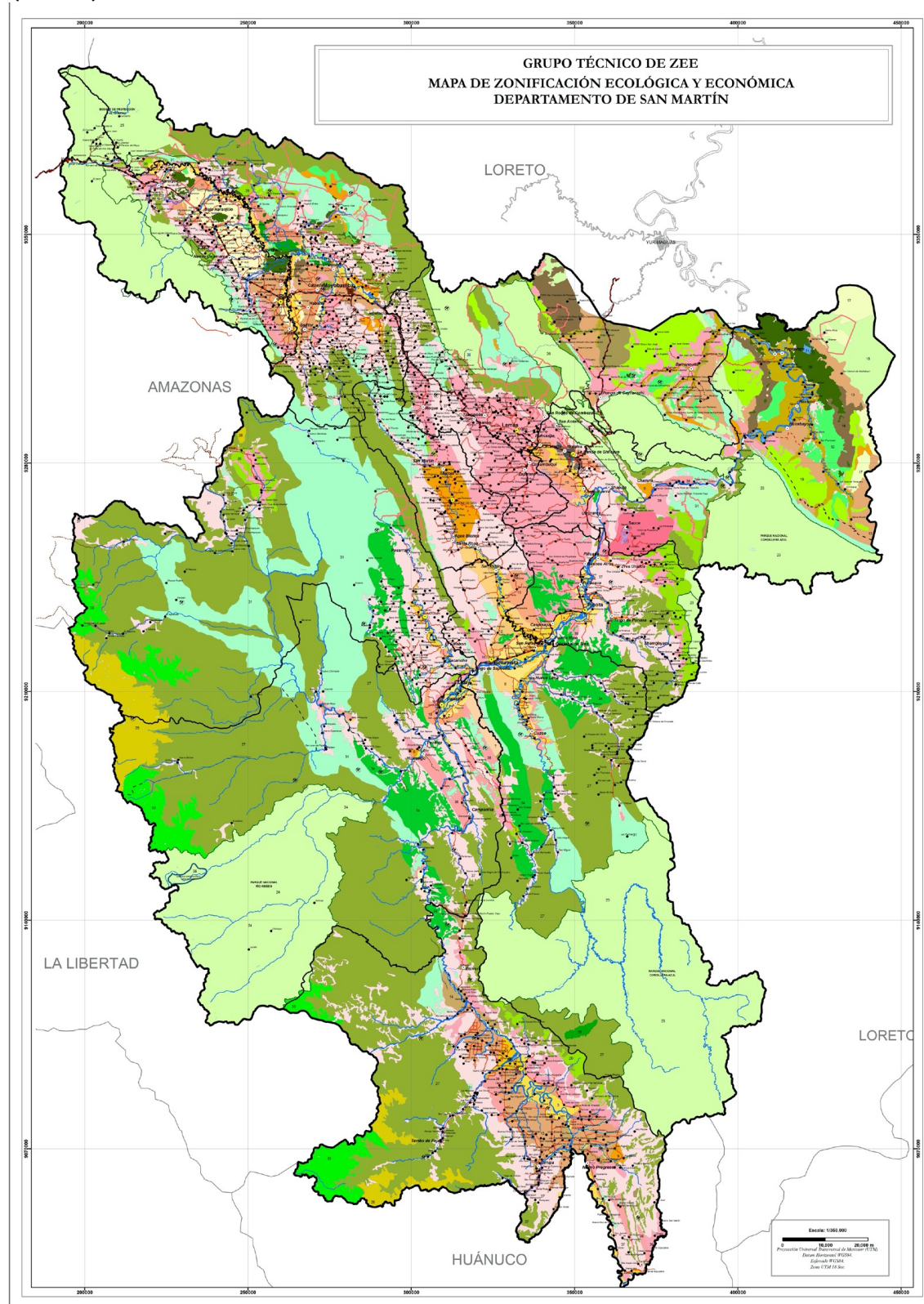
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## APPENDICES

### Appendix I: Map of the Biosphere Reserve Gran Pajatén



## Appendix II: San Martín's economic ecological zonification (ZEE)





LEYENDA																				
GRANDES ZONAS		ZONAS ECOLÓGICAS ECONÓMICAS		SUPERFICIE  ha. %		TIPOS DE USO														
						AGRICULTURA ANUAL	AGRICULTURA PERENNE	GANADERÍA	EXTRACCIÓN DE MADERAS NO MADERALES	AGROFORESTÍA	AGROSILVOPASTORÍA	PESCA DE SUBSISTENCIA	PESCA COMERCIAL	PISCICULTURA	TURISMO	EXPLOTACIÓN MINERA	CONSERVACIÓN	REFORESTACIÓN	CAZA DE SUBSISTENCIA	INVESTIGACIÓN
A.-   <																				

SIMBOLOGÍA DE ZONIFICACIÓN DENTRO DE ANPs	
DESCRIPCIÓN	SÍMBOLO
Zona de Protección Estricta	ZPE
Zona de Recuperación	ZR
Zona Hábitat Cultural	ZHC
Zona Silvestre	ZS
Zona de Uso Especial	ZUE
Zona de Uso Turístico	ZUT

SIGNOS CONVENCIONALES	
<div>■ Capital de Departamento</div> <div>● Capital de Provincia</div> <div>⊕ Capital de Distrito</div> <div>⚡ Ríos Dobles y Simples</div> <div>⚡ Lagunas</div> <div>— Límite Departamental (*)</div> <div>— Límite Área de Conservación Municipal</div> <div>— Límite propuesto por el Gobierno Regional</div>	<div>— Límites Territoriales de Comunidades Indígenas</div> <div>— Límites Zonas de Amortiguamiento de Áreas Naturales Protegidas</div> <div><b>Vías</b></div> <div>— Asfaltada</div> <div>— Almacén</div> <div>--- Trocha Carrocable</div> <div>--- Camino de Herradura</div>

### **Appendix III: A Formal Response to the Thesis from Pur Projet**

The document below was developed following a process of sharing and collaboration between the researcher and Pur Projet throughout this doctoral research. Where possible, this was reflected in the content above, but this ‘right of reply’ is included here to highlight any areas where Pur Projet’s analysis of the situation differs from my own and to provide a subsequent update on their projects in Peru.

## RIGHT TO REPLY

William Lock's thesis

*"Trees, Forests and Farmers:  
For-Profit Conservation and Voluntary  
Carbon Markets in Peru"*

**May 2021**

## INTRODUCTION

PUR Projet firmly believes in adaptive management as well as in close collaboration with the academic world to continuously improve field operations within our projects. In recent years, we have collaborated extensively with research teams from multiple fields, ranging from ecology to social sciences and ethnography, in order to understand social and environmental dynamics at the basis of our projects, and identify the most innovative pathways towards monitoring and valuing project impacts. With this mindset, we have collaborated with William Lock during his field research from 2017 to early 2019. We believe it is critical for social science to focus on conservation frameworks and have welcome this work and opportunity to draw perspective on field challenges and operations.

Following this collaborative process of working with William Lock, the following document highlights areas where our vision and analysis of the project diverges from certain arguments presented in this thesis, providing additional context on certain key points and updates on the project's evolution since fieldwork was completed.

## PERUVIAN CONTEXT AND PERSPECTIVE OF LOCAL STAKEHOLDERS

Deforestation rates in San Martin are alarming, with a 3,96% anthropogenic deforestation yearly rate from 2015 to 2020. This deforestation is mainly driven by corruption, poverty, land trafficking activities from highly organized mafias, and the lack of land tenure rights. In particular, the San Martin region is one of the most degraded regions of Peru and is being deforested at a rate of 67,000ha/year. Poverty spirals forcing farmers to choose between forest conservation and maximizing family income through intensifying agricultural production drive deforestation in the area. The migratory agriculture, the traditional swidden agriculture, and the previous large scale coca production are also responsible for this situation of widespread deforestation and resulting degraded and unproductive land.

In this context, forest conservation efforts are challenging, and historically underfunded. REDD+ has been used by our organization as a tool to support community initiatives towards conservation, as well as support livelihoods in the area. It is worth reminding that REDD+ operations must be considered in the context in which they are carried out. There are inherent difficulties to areas prone to deforestation, and REDD+ projects navigate those difficulties to favour forest conservation.

In the case of the Biocorredor Martin Sagrado project, it is driven by a field vision putting communities and local organizations at the core of the decision process. The project envisions a future in which communities<sup>1</sup> develop profitable and self-sufficient economic activities that allow them to live with dignity, without depending on any type of outside support, while conserving the surrounding primary forest. To achieve this vision, the project's approach is to let communities build their own future, by managing the territory sustainably, through a process that promotes empowerment and autonomy. This entails creating mechanisms that allow the creation of value for natural resources conservation. As a result, conservation activities in the project area are community-led and implemented with a unique

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<sup>1</sup> The term "communities" refers to small villages located in the project area or in the project's buffer area. They are composed of a few families up to several hundred families.

organizational structure, including democratic and participative decision-making processes, as well as regular meetings and workshops for local associations.

During its first decade, the project has focused its resources on establishing its operations, structuring its governance, and ensuring control and surveillance activities. Among other accomplishments, detailed later in this document, 3 conservation concessions, run by local organizations, have been formalized to protect 295,654 ha of forest. Activities are defined through a bottom-up process, allowing local inhabitants to define most of conservation activities. Moreover, since 2019 the project is increasingly focused on developing technical assistance, income diversification, and monitoring and evaluation activities. These achievements<sup>2</sup> have been allowed by the REDD+ funding mechanism, and there is no example of successful large-scale conservation projects in Peru that have not been funded by REDD+ projects.

On another note, our perspective is that one theoretical framework used in the thesis, namely the “accumulation by dispossession” that builds on Marx’s theory of primitive accumulation, is at times extrapolated onto the local reality of the Huayabamba valley. Indeed, the Biocorredor Martin Sagrado project rather empowers local communities, organizations, and inhabitants to formalize their land tenure thanks to the legal activities. This has been a significant focus of the project since its inception, that allowed to formalize 19,608 hectares in the project’s buffer area, directly benefitting smallholders land rights and the collective community rights.

Regarding tree planting activities, there is no tradition in Peru to invest in plantation forestry, agroforestry or sylvopasture. There was almost no reforestation activity in the San Martin Region at the time of the start of the Jubilacion Segura project. Since the project started in 2008 with ACOPAGRO cooperative, the government has shown renewed interest in offering reforestation projects to the populations in San Martin region, but projects led by the Government failed due to a lack of training, technical assistance, and monitoring.

Overall, the perspective from local employees and local partners is that projects funded by carbon credits are of course not perfect, and bring their own constraints, but a viable and efficient mechanism to fund conservation and restoration activities at scale in the Peruvian context.

## **PRECISIONS ON LOCAL AGRICULTURAL AND PLANTATIONS PRACTICES**

In the fifth chapter of William Lock’s Thesis, it is mentioned that “*the focus on commodity crop production risks locking in a specific development pathway for local communities and repeating the same failures of agro-industrial approaches elsewhere in the world*”. Forest conservation and restoration projects must be considered in the context in which they operate. If PUR Projet’s projects do have an influence on land use, this influence is limited by the existing land uses, agricultural practices, and the eagerness (or lack of) of inhabitants to accept new proposed practices. In the case of the Huayabamba valley, the

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<sup>2</sup> Detailed in the ‘Benefits generated by the project so far’ part.



main crop cultivated is cocoa - which is mainly grown in a semi-intensive way, with hardly any shade trees.

In this context, the REDD+ project mainly implements diversification activities such as indigenous beekeeping ("meliponiculture"), vegetable community gardens, fish farming or guinea pigs breeding. It also provides technical assistance to some cocoa, coffee, and livestock farmers, to empower them with technical skills to sustainably increase their productivity on their sometimes-depleted soils. As for the Jubilacion Segura project, it proposes alternatives to cocoa farmers by providing them the opportunity to grow timber within their cocoa plots (agroforestry), or within plots that were previously abandoned. As such, both projects provide alternatives to cocoa farmers to diversify their livelihoods or grow their main crops - cocoa or coffee - in a more sustainable way. Both projects do not focus on "*commodity crop production*", but rather deal with a matter-of-fact reality where the land use is dominated by "full-sun" intensive cocoa production. Projects' activities do not stir farmers towards a more "*agro-industrial approach*" but rather deal with existing agricultural practices, while introducing diversification that was seldom present before the project's interventions.

In the second chapter of the thesis, it is mentioned that "*The Nature Conservancy is able to claim that reforestation is the most cost-effective way to mitigate carbon emissions, followed by avoided forest conversion, therefore making it more cost-effective to replant forests than not to chop them down*". Of course, in its Jubilacion Segura project PUR Projet takes special care to not replant areas recently deforested. It should also be noted that there is a non-deforestation criterion of at least 10 years for VERRA projects to ensure this is not the case. As its plantations project Jubilacion Segura is certified by Verra, this condition is strictly monitored during Verra audits.

In the second and fourth chapters of the Thesis, requirements to be considered 'forests' are mentioned several times in a way that is not in line with Jubilacion Segura's operations: "*with trees to reach the minimum requirement to be considered 'forest' (by height, crown coverage and area), in this case by the Peruvian state, and thus be eligible for carbon credits*" and "*to reach the minimum requirement to be considered 'forest' by the Peruvian state*". If indeed AFOLU projects consider the FAO definition of forest (which has been adopted by Peru), it is not what determines the density and species of planting models for Jubilacion Segura. Instead, the objective of the tree plantation must be considered. In most of the cases, it is timber logging, which given the small size and dispersion of parcels implies rationally simplified models.

In the eighth chapter, it is mentioned that "*project leaders made the link between the success of the project and recent increased migration and rates of deforestation in the valley. The focus on expansion and commodity crops has thus, counterintuitively, created a vibrant new commodity frontier which risks further deforestation. For exactly this reason, local conservation scientists have strongly suggested that 'in newly settled areas, actions should be focused on controlling land trafficking*". Project efforts are focused on supporting income diversification of producers through timber plantations, technical assistance to cocoa, coffee and livestock producers, but also beekeeping, fish farming or guinea pig breeding. Those initiatives aim at ecologically intensifying plantations already in place, and at

diversifying inhabitants' incomes. While thriving agricultural areas can put neighbouring forests at risk, the opposite is also true and it should be clear for readers that none of these activities have generated deforestation, either directly or indirectly, in the project area.

#### *Precisions on Jubilacion Segura operations*

Project beneficiaries are smallholder farmers who produce cocoa or coffee. They are part of one of the cooperatives and local producers' associations. Reforested areas are the farmers' land, and comprise parcels smaller than 20 hectares, with an average close to 1 hectare per farmer. Land-use before restoration can be perennial crops (cocoa, coffee, orange, etc.), annual crops (corn, rice, etc.), abandoned land or land in rotations with annual crops ("*purmas*"), pastures.

Farmers join on a voluntary basis, and participate actively in the project, in its design and operations: farmers plant and care for trees on their own land. They take part in the project through their cooperatives in the promotion of good practices, the development of co-products value chain, the securing of land tenure, and the national and international recognition of their contribution.

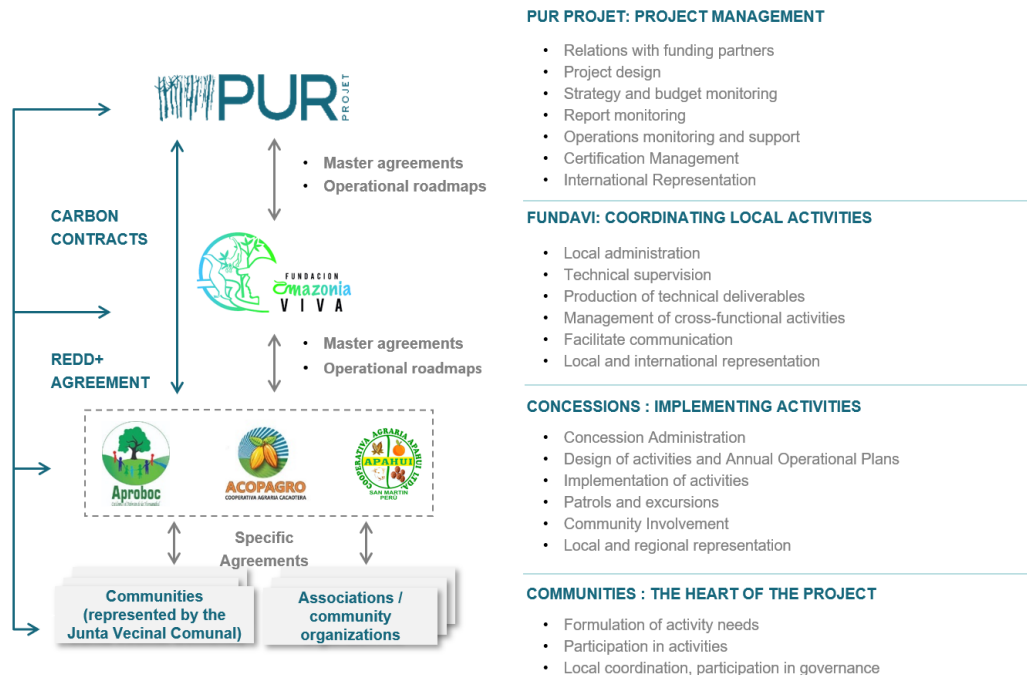
All the parcels must comply with the following requirements:

- Owned by small holders (less than 20 hectares)
- not deforested in the last 10 years
- Not falling under "forest" category as defined by Peruvian directives
- Owner has clear land-use rights with no land tenure conflicts
- Outside of any conservation area (National Parks, concessions for conservation, etc.) and any large economic concessions (forestry, oil, mining, etc.).
- Furthermore, they comply with the following certifications standards, verified by third parties and certifying bodies: Verified Carbon Standard (VCS) and Forest Stewardship Council.

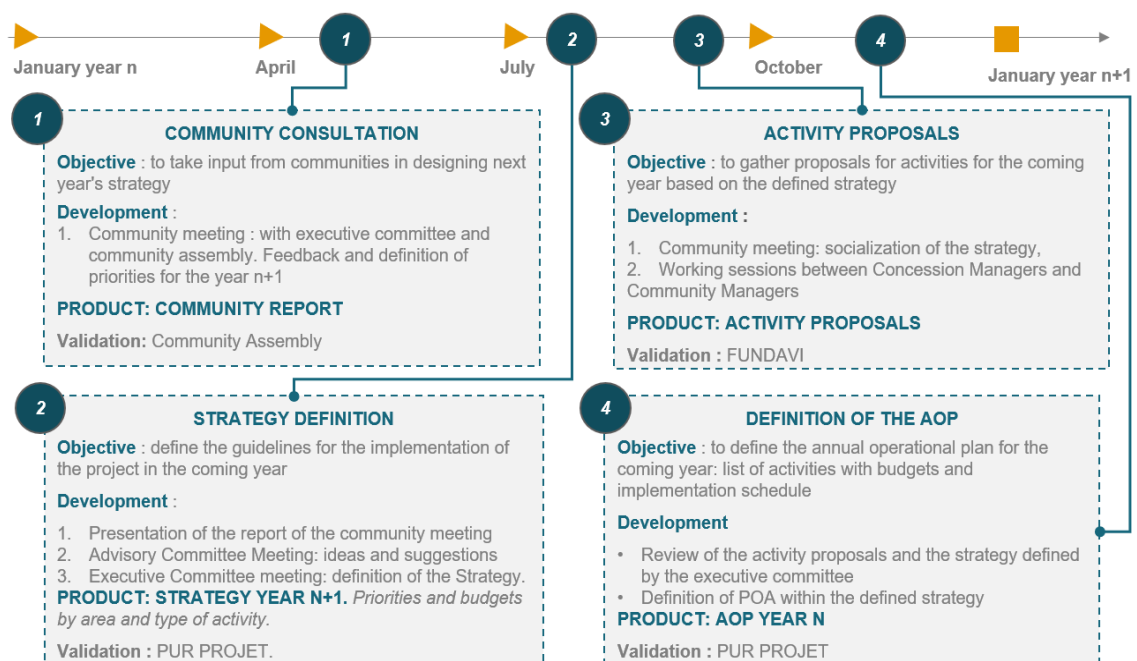
#### **REPRESENTATIVE AND BOTTOM-UP ASPECT OF THE REDD+ PROJECT**

The bottom -up approach of the Biocorredor Martin Sagrado REDD+ is articulated through its governance structure, its annual operational plans and budget procedure, as well as through its grievance and complaints procedure.

The governance structure of the Biocorredor Martin Sagrado REDD+ project reflects the bottom -up approach of the project. The following layout illustrates the main roles of each stakeholder involved:



To ensure this governance approach is effectively articulated, communities at village level are involved in the design of the annual operational plans (AOP), which define the activities and the distribution of the budget each year. Communities are consulted at the very beginning of the AOP procedure and by co-designing the activities. The new procedure for the AOP is illustrated in the following layout:



Furthermore, to ensure any potential flaw could be identified and solved, grievance mechanism and procedure for complaints have been launched. They are designed to help any project stakeholder (members of communities, organisations, etc) to share in an anonymous way any potential flaw of the project to the Project's management team.

Apart from its governance and operational processes, the representativity of the Biocorredor Martin Sagrado REDD+ is also reflected in its workforce. Thus, 95% of the 47 employees of the Biocorredor Martin Sagrado REDD+ are local people coming from – and living in – the Project area.

### **BENEFITS GENERATED BY THE PROJECT SO FAR**

Forest conservation and restoration projects in the Huayabamba valley operate in a complicated context. As exposed in the thesis, most of the producers of the valley used to be *cocaleros*, who shifted to cocoa farming after USAID intervention and the so-called “war on drugs”. On one hand, the land use history of coca and intensive cocoa cultivation left soils depleted in a significant number of farms in the valley. On the other hand, deforestation rates in San Martin region are among the highest in Peru, and if there were no deforestation issues there would not be any REDD+ project.

Though far from perfect, Biocorredor Martin Sagrado and Jubilacion Segura projects operated in this difficult context to bring tangible benefits to local communities and their environment. Below is a non-exhaustive list of these benefits:

#### *Biocorredor Martin Sagrado REDD+ project*

- 295,654 ha of forests protected;
- 566,843 tCO<sub>2</sub>e of emissions reductions from reduced deforestation;
- 6 additional concessions supported by the project for a total area of 18,747 hectares. These additional conservation concessions allow to preserve the remaining surrounding forest in communities of the buffer area.
- Support for the recognition of individual and collective community rights through active lobbying (ARA, SERFOR, Government of San Martín).
- 19,608 hectares have been formalized in the buffer area, benefitting smallholders land rights and the collective community rights.
- Support for the creation of 32 community associations (4,478 farmers associated with the project) and Neighborhood Councils (official legal entities within the communities);
- Continuous training and skills development of the technical teams dedicated to the project within the 3 organizations holding the conservation concessions;
- Implementation of a system of community facilitators (*Gerentes Comunitarios*), representing the project in their communities, coordinating activities and gathering people for training sessions;
- Project's stakeholders took an active part in the recognition of the Gran Pajatén Biosphere Reserve;

- Installation and maintenance of 5 control posts at strategic points of entrance in areas threatened by deforestation. In 2020, zero deforestation in areas close to control posts, where the deforestation pressure was the highest at project's start.
- Visits to educational institutions in 21 communities since 2014 for educational workshops on climate change, forest conservation, biodiversity and water management. 600+ local people participate in environmental awareness workshops every year;
- Creation and regular operation of a local radio station "Radio Alto Huayabamba, La Voz de la Reserva de Biosfera";
- International recognition of the project as a Biosphere Reserve and Model Forest;
- 161 cocoa smallholders benefiting of the technical assistance of the project;
- 84 producers participating in beekeeping activities and honey production;
- 30 production Fish Breeding units managed by 8 community associations;
- Technical assistance was provided to 96 families of coffee smallholders;
- 48 local employees in local organizations, and 2 employees dedicated full-time at PUR Projet.

#### *Jubilacion Segura*

- 5,103,000 trees planted so far;
- 227,497 tCO<sub>2</sub>e sequestered;
- 7,691 farmers directly benefited from the project by planting trees in their plots;
- 20+ species planted.

#### **PROJECT EVOLUTIONS ON SPECIFIC POINTS MENTIONED IN THE THESIS**

The thesis is based on field sessions that spanned from 2017 to early 2019. It corresponds to a period when the Biocorredor Martin Sagrado REDD+ and Jubilacion Segura projects were both significantly understaffed due to budget constraints. Since mid-2019, the REDD+ project benefits from further financial visibility thanks to a multi-year agreement. This financial visibility allowed the project to increase significantly human and financial resources dedicated to the project, both at local organizations and at PUR Projet's levels.

As for the Jubilacion Segura project, it has also been staffed significantly more thanks to other funding sources. In the fourth chapter, it is mentioned that *"the whole existing supply of reforestation plots in the valley are administered by just one (very overworked) employee and occasionally one extra assistant"*. There are now 3 employees dedicated to this project within FUNDAVI, and 20 professionals (forestry and environmental experts) work now full-time on the Jubilacion Segura project. Since August 2019, a Jubilación Segura Committee has also been created, with the aim to bring continuous improvement and to support smooth governance of the project, in an inclusive and collaborative way.

In the sixth chapter, it is mentioned that *"as shared purpose is replaced by metrics established from afar, the bureaucracy associated with verification of the project diverts time and focus from the basic conservation work of patrolling and reporting incursions. The project, in turn, employs and attracts those*

*who work with timber, forestry and co-operatives, rather than biologists and conservationists".* It is essential for a REDD+ project to closely monitor its impacts, and to take its decisions based on unbiased, objective data. That involves monitoring regularly with accurate data. A new system of monitoring and reporting has been implemented since late 2019 (after the field work of the research). This new monitoring system involves strong metrics not only to be shared to PUR Projet, but also ensures that local organizations teams are empowered with the relevant data to take appropriate decisions. Regarding human resources dedicated to the REDD+ project, the 50-people team has been shaped to implement activities in the best way. That includes that most of its employees are local people, living in the project area itself, but also that some key people bring their technical skills to the project, including 2 biologists and several agricultural and forestry technicians and engineers - who are the most skilled at bringing technical assistance to local producers. As an example, those new human resources allowed the implementation of a wide-ranging investigation work in 2021, in partnership with renowned researchers from the Universidad Católica del Perú (INTE-PUCP). This investigation work includes rigorous inventories and monitoring of the flora and fauna, analysis of water and greenhouse gas exchanges between vegetation and the atmosphere in the project area, as well as the identification and characterization of non-wood forest resources.